ANNUAL REPORT

(1 April 1981 to 31 March 1982)

INDIAN NATIONAL SCIENCE ACADEMY
Bahadur Shah Zafar Marg, New Delhi-110002

ANNUAL REPORT

(April 1, 1981 to March 31, 1982)

The council presents the 47th Annual Report of the various activities of the Academy for the period 1st April 1981 to 31st March 1982 to its fellows.

The Council places on record its deep sense of sorrow at the passing away of the following distinguished fellows since the last report.

Fellows	Foreign Fellows
Dr R K Asundi	Dr J H Burn
Dr F R Bharucha	Sir Hans (Adolf) Krebs
Dr G P Chatterjee	Dr H Yukawa
Dr R N Chaudhuri	
Professor Har Swarup	
Dr S R Palit	
Dr Ram Behari	
Dr S N Ray	
Dr N K Sur	
Dr K Venkataraman	

1. COUNCIL ACTIVITIES

1.1 The Council

The following Fellows were elected to the Council of the Academy at the Annual General Meeting on 1st October 1981.

1.	Dr Sadan Basu	*Calcutta*
2.	Dr D S Bhakuni	*Lucknow*
3.	Dr G B Deodikar	*Pune*
4.	Dr P K Iyengar	*Bombay*
5.	Dr Anna Mani	*Bangalore*
6.	Professor E C Subbarao	*Pune*

The following were re-elected to the Council of the Academy at the Annual General Meeting held on 1st October 1981 :

Professor M G K Menon	*President*
Professor S C Bhattacharyya	*Vice-President*
Dr A S Paintal	*Vice-President*
Dr V G Bhide	*Treasurer*
Professor D Lal	*Foreign Secretary*
Dr A P Mitra	*Secretary*
Professor P N Tandon	*Secretary*
Professor H Y Mohan Ram	*Editor of Publications*
Professor S K Trehan	*Editor of Publications*
Professor P K Bhattacharyya	*Members*
Professor G K Manna	,,
Professor R C Misra	,,
Professor Ramdeo Misra	,,
Dr N A Narasimham	,,
Professor H L Nigam	,,
Dr Brahm Prakash	,,
Professor S Raghavan	,,
Professor M R Rajasekharasetty	,,
Dr O Siddiqui	,,
Professor (Mrs) Archana Sharma	,,
Professor M M Sharma	,,

The following Fellows were nominated by the Cooperating Academies to the Council for the year 1982.

Asiatic Society Calcutta	Professor R N Chakravarti
Indian Science Congress Association	Proffssor S K Mukherjee
National Academy of Sciences (India)	Professor U S Srivastava
Govt. Representative	Dr S Sriramachari

1.2 Election of Fellows

Twenty seven scientists were elected as Fellows (*Annexure-I*) and eight were elected as Foreign Fellows (*Annexure-II*) at the Annual General Meeting of the Academy held on 1st October 1981.

1.3 Organising of an Exhibition

A group consisting of the following was constituted by the Academy for examining the question of organizing an exhibition, sometime during 1982 at Delhi.

DR M S SWAMINATHAN — *Convener*
DR P M BHARGAVA
PROFESSOR D LAL
PROFESSOR H Y MOHAN RAM

The proposal is receiving consideration of the Academy regarding the place, date and mode of exhibition.

1.4 Collaboration with Scientific Societies

The Council resolved to collaborate with nine more Scientific Societies as listed below :

(i) The Acoustical Society of India, *New Delhi*
(ii) The Society for Advancement of Electrochemical Sciences and Technology, *Karaikudi*
(iii) Geological Society of India, *Bangalore*
(iv) Society of Biological Chemists India, *Bangalore*
(v) Phycological Society, India, *New Delhi*
(vi) Indian Pharmacological Society, *New Delhi*
(vii) Indian Mathematical Society, *Bangalore*
(viii) Tamil Nadu Academy of Sciences, *Madras*
(ix) Indian Geotechnical Society, *New Delhi*

1.5 Presentation of awards

Science Academy Medals for Young Scientists 1981

Twenty Scientists below the age of 32 as on 31st December 1980, as listed in the *Annexure-III* had been selected for the award of Science Academy Medals for Young Scientists 1981.

The award consisting of a bronze Medal and cash prize of Rs. 5000/- was presented to 18 on the 3rd January 1982 by the Prime Minister of India at the Inaugural Session of the 69th Session of the Indian Science Congress at the Mysore University, Mysore. Two Young Scientists were abroad at that time.

One of the INSA young scientists medals for the year 1978 awarded to Dr Kalidas Sen was presented to him at a function arranged under the auspices of the Local Chapter at Hyderabad.

Academy awards presented at the Annual General Meeting on 1st October 1981:

(i) The Meghnad Saha Medal 1981 was presented to Dr M S Swaminathan, FNA.

(ii) Professor D Lal FNA received the cash award of Rs. 1000/- towards the honorarium of the K S Krishnan Memorial Lecture 1981.

(iii) Dr A N Radhakrishnan, FNA received the cash award of Rs. 1500/- towards honorarium for the Bires Chandra Guha Memorial Lecture for 1981.

The recipients of the above awards delivered lectures on the topics of their interest.

Academy awards presented at the Anniversary General Meeting held on 2nd January 1982 at Mysore University, Mysore:

(i) The Homi J Bhabha Medal 1981 to Professor F C Auluck, FNA

(ii) The Sunderlal Hora Medal 1981 to Dr C R Krishna Murti, FNA

(iii) The P C Mahalanobis Medal 1981 to Dr Y Nayudamma, FNA

The above Fellows delivered Medal Memorial Lectures on the topics of their interest.

1.6 Announcement of awards for 1982

(i) The C V Raman Medal to Professor G N Ramachandran, FNA

(ii) The Srinivasa Ramanujan Medal to Professor S Chowla, FNA

(iii) The Shanti Swarup Bhatnagar Medal to Professor T R Anantharaman, FNA

(iv) The Silver Jubilee Commemoration Medal to Dr V S Mathur

(v) Professor T R Seshadri Seventieth Birthday Commemoration Medal to Dr Sukh Dev, FNA

(vi) The Vishwakarma Medal 1982 to Dr Nitya Nand, FNA

The INSA Endowment Lecture 1981

(a) Professor K Rangadhama Rao Memorial lecture 1981 to Professor K Narahari Rao, Eminent Spectroscopist, Department of Physics, Ohio State University, USA

(b) The G P Chatterjee Memorial lecture 1981 to Professor S C Bhattacharyya, FNA

The Lord Blackett Memorial Lecture: Dr M S Swaminathan at present Director General, International Rice Research Institute, Manila, Philippines has been nominated to deliver the 4th Lord Blackett Memorial Lecture at the Royal Society London

1.7 Institutions of Awards

(a) The Academy accepted an offer of Rs. 10,000/- from Mrs. Savitri Swarup in December 1981 towards the institution of an INSA Endowment Lecture in memory of late Dr H Swarup, FNA

(b) The Academy accepted an offer of Rs. 25,000/- from the Convener, Professor T S Sadasivan Endowment Committee for the institution of an INSA Endowment Lecture in honour of Professor T S Sadasivan, FNA. An additional sum of Rs. 5,000/- was received for the first lecture to be arranged in the year 1982.

1.8 Financial assistance to Smt. Srinivasa Ramanujan

The Academy is providing financial assistance of Rs. 1000/- per month to Smt Janaki Ramanujan widow of Srinivasa Ramanujan with effect from August 1981.

1.9 Visits

A seven member Chinese delegation led by Vice-President, Academia Sinica visited the Academy and other institutions in India from 28th December 1981 to 11th January 1982. They had discussions with their counterparts in these institutions on matters of Scientific interest.

1.10 Representation on other organizations

(a) Professor B R Nag and Professor R C Mehrotra were nominated on the Council of the Indian Association for the Cultivation of Sciences, Calcutta for 1981-82.

(b) Professor S C Bhattacharyya, FNA was nominated to represent INSA on the Advisory Board for the award of the Rabindra Nath Tagore Birth Centenary Plaque for 1981 of the Asiatic Society, Calcutta.

(c) Dr Nitya Nand was nominated on the Committee for the award of the Professor T R Govindachari Sixtieth Birthday commemoration award in organic chemistry for 1981-82 of the Madras University.

(d) Professor R C Misra was nominated to represent INSA on the council of the Birbal Sahni Institute of Palaeobotany, Lucknow for the term of three years from 9th July 1981.

(e) Professor P R Pisharoty was nominated to continue to be representative of the Academy on the Committee for Weather Modifications, India Meteorological Department, Govt. of India.

(f) Dr V G Bhide was nominated to represent the Academy on the Sub-Commission of the Indian National Commission for Cooperation with UNESCO.

(g) Professor D S Kothari was nominated to represent the Academy on the Indian Council of Philosophy, Ministry of Education and Culture.

1.11 Local Chapters

Local Chapters are functioning at Ahmedabad, Allahabad, Bangalore, Bombay, Calcutta, Chandigarh, Delhi, Hyderabad, Kanpur, Lucknow, Madras, Pune, Roorkee, Trivand-

rum and Varanasi. Brief report of the activities of the Local Chapters are given at *Annexure-IV*.

1.12 Lectures

1. Dr R Maitra	An illustrated talk on Fusion Energy and Space Exploitation (Voyageuer I and Columbia Shuttle) at INSA, New Delhi on 16th May 1981.
2. Dr S Z Qasim	'Deep Sea Mining' at INSA New Delhi on 1st August 1981.
3. Professor D Barritault	Two talks on Biochemical and Biological Effects of a New Cellular Growth Factor : EDGE or Eye Derived Growth Factor—at AIIMS & JNU, on 29th August 1981.
4. Professor A N Radhakrishnan	The Bires Chandra Guha Memorial Lecture 1981 on 'Protein Digestion—An Overview' at INSA New Delhi on 30th September 1981.
5. Dr M S Swaminathan	The Meghnad Saha Medal Lecture 1981 on 'Plant Breeding in preparation for the Twentyfirst Century' at INSA, New Delhi on 1st October 1981.
6. Professor D Lal	The K S Krishnan Memorial Lecture 1981 on 'Rocks and Time' at INSA, New Delhi on 1st October 1981.
7. Dr C R Krishna Murti	The Sunder Lal Hora Medal Lecture 1981 on 'Bilirubin— A Model for the Study of An Endogenous Toxic Chemical' at the Central Food Technological Research Institute, Mysore on 1st January 1982.

8. Dr Y Nayudamma	The P C Mahalanobis Medal Lecture 1981 on 'Science, Technology and Development in Leather Industry, at the Central Food Technological Research Institute, Mysore on 1st January 1982.
9. Professor F C Auluck	The Homi J Bhabha Medal Lecture 1981 on 'Application of Statistical Mechanics to Some Problems in Physics and Astrophysics' at the Central Food Technological Research Institute, Mysore on 2nd January 1981.
10. Professor M G K Menon	The 47th Anniversary Address by the President, INSA on 'Research in Astrophysics— A Thrust Area for Indian Science' at the Central Food Technological Research Institute, Mysore on 2nd January 1982.
11. Professor D Whittreidge	'Newlight on Cortical Organization' at INSA, New Delhi on 11th January 1982.
12. Professor Karl Maramorosch	'Spiroplasmas—New Group of Animal and Plant Pathogens' at INSA, New Delhi on 14th January 1982.
13. Dr Roderic B Park	'Role of Chloroplast Polypeptides in Photosynthesis' at INSA, New Delhi on 24th February 1982.

1.13 Fellowship

The total number of Fellows as on 31st March 1982 stood at 485 and Foreign Fellows 74.

2. LIBRARY

2.1 Four hundred thirty nine books were added to the library out of which *103* publications were received on complimentary basis. The total number of books in the library as on 31st March, 1982 was *19507*. More than *1100* current journals on Science and Technology were received. Eight hundred sixty three volumes of journals were got bound during this period, raising their number to *16994*.

2.2 Under the scheme for the compilation of the History of Science in India, *103* books were added. The total number of books pertaining to this scheme is over *2552*.

2.3 The number of Books/Journals issued on Loan during the period was *1131* and *1002* readers consulted the library.

2.4 During the year 15648 pages were photocopied and 34061 copies made. This service is rendered free of charge to the fellows of the Academy for their Scientific work. *2238* Electronic stencils were also made. Three hundred twenty seven pages were photocopied for Non-Fellows academic work against payment @ Re. 1/- per page and 43 Electronic stencils were made @ Rs. 5/- per stencil.

2.5 Five persons joined as Enrolled Members of the Academy's library after depositing a refundable security amount of Rs. 50/- and the total number of Enrolled Members as on 31st March, 1982 stood at 46.

2.6 As a consequence of the requests sent to Fellows and to the Conveners of INSA Local Chapters, for the Personal Records proformae, the Library received back duly filled in Proformae from 22 Fellows. The total number of the Personal Records Proformae in respect of the Fellows and Foreign Fellows is 215 and 17 respectively. The Number of photographs of the Fellows, available with the library as on date is 236.

2.7 The Library continued the review of the exchange of publications and as a result the exchange with Indian Institutions was reduced by the following number of copies of various

journals :

(i) Proceedings Part-A : 18

(ii) Proceedings Part-B : 15

(iii) Indian Journal of Pure and Applied Mathematics : 2

(iv) Year Book : 23

2.8 Fresh exchange relations were established with 9 foreign and 1 Indian societies. The work of compilation of a list of the duplicates availablehas been completed,

2.9 Books were displayed during the International conference on Flood Disasters and a select list of publications on this topic was brought out.

2.10 A list of the deceased Fellows of the Academy was compiled for incorporation in tne Year-Book.

2.11 A current list 1982 of the serials being received in the INSA Library was brought in a mimographed form. It lists 1176 titles, out of which 649 are being received on exchange basis. The list is provided with a sponser index and a subject Index. The list is being sent to Fellows of the Academy and other science libraries.

3. INSA PUBLICATIONS SECTION

The following Publications were brought out:

3.1 Proceedings of the Indian National Science Academy Part A (Physical Sciences)

Vol. 47 (1981) Nos. 2 to 6 (including index) pp. 608

Vol. 47 (1981) Suppl. No. 2 pp. 166

Vol. 48 (1982) No. 1 pp. 118

3.2 Proceedings of the Indian National Science Academy Part B (Biological Sciences)

Vol. 47 (1981) Nos. 2 to 6 (including index) pp. 834

Vol. 48 (1982) No. 1 pp. 162

3.3 Indian Journal of Pure and Applied Mathematics

Vol. 12 (1981) Nos. 4 to 12 (including index) pp. 1086

Vol. 13 (1982) Nos. 1 to 2 pp. 271

3.4 The statement given below represents the position regarding papers published in the Proceedings of the Indian National Science Academy—Part A and Part B; and the Indian Journal of Pure and Applied Mathematics :

	Proceedings Part A	*Proceedings Part B*	*IJPAM*
Papers Received	154	228	606
Papers accepted for Publications	56	73	202
Percentage of accepted Papers	34%	32%	34%
No. of papers published	82*	115*	160*
Issues published	7	6	11
Papers received for Supplements	124	—	—

*Including papers received in earlier years.

3.5 Other Publications

(i) INSA Newsletter (Quarterly) pp. 120

(ii) Book of Nominations valid for consideration for Election to Fellowship—1982 (Annually) pp. 272

(iii) Science Academy Medals for Young Scientists Lecture—1981 (Annually) pp. 244

(iv) INSA Year Book—1982 (Annually) pp. 476

(v) Annual Report (1980-81) (Annually) pp. 182.

(vi) Balance Sheet (1980-81) (Annually) pp. 62

(vii) Proceedings of the Symposium on Insect Vector Biology (Part of Proceedings Part B, Vol. 47, No. 6) pp. 176

(viii) National Report (1978-80) for URSI pp. 78

(ix) B C Guha Memorial Lecture— 1981 pp. 8 (Protein Digestion and absorption—An Overview by A N Radhakrishna)

(x) K S Krishnan Memorial Lecture—1981 pp. 16 (Rocks and Time by D Lal)

(xi) Meghnad Saha Medal Lecture—1981 pp. 20 (Plant Breeding in Preparation for the 21st Century by M S Swaminathan)

(xii) The Homi J Bhabha Medal Lecture—1981 pp. 18 (Statistical Mechanics and its Application to Physics and Astrophysics by F C Auluck)

(xiii) The Sunderlal Hora Medal Lecture—1981 pp. 18 (Bilirubin—A Model for the Study of an Endogenous Toxic Chemical by C R Krishna Murty)

(xiv) Catalogue—INSA Publication—1982 (Annually) pp. 26

(xv) Report on the Global Seminar on the Role of Scientific and Engineering Societies in Development pp. 80

(xvi) Proceedings of Post Harvest Food Conservation pp. 190

(xvii) Proceedings of National Symposium on Space Science pp. 172 (Part of Proceedings Part A; Vol. 47, No. 2)

(xviii) Abstracts and Programme and Post date wise abstracts and List of Participants for International Conference on the Applications of the Mössbauer Effect pp. 562

(xix) Information and guidelines adopted by Indian National Science Academy for ICSU Programmes, pp. 44

(xx) Different Voting Papers for Amendment of INSA Rules, Fellows, and Council Members pp. 60 (approx.)

(xxi) Presidential Remarks for Young Scientists for 1981 (Annually) pp. 4

(xxii) A number of Letters Circulated among the Fellows, pp. 16

(xxiii) Letter and Circular of General Medals for 1984, pp. 6

(xxiv) Nomination Form for INSA Fellowship—4 times, pp. 8

(xxv) Application Form for Science Academy Medals for Young Scientists—Twice, pp. 8

(xxvi) Quarterly Programmes circulated among the Fellows —8 times, pp. 80

(xxvii) Folders—Summer School of Fishery Biology and Seminar on Research and Development for Planned Utilization of Mineral Resources pp. 16

(xxviii) Different Invitation Cards—33

(xxix) Greeting Cards

(xxx) Folder—International Conference on Flood Disasters

(xxxi) Miscellaneous Publications (Publicity Folder for sales, INSA Letterheads, Visiting Cards, Cash Memo, Invoice, Referee's Proforma etc.) etc. pp. 100.

4. HISTORY OF SCIENCE

The History of science project has been working as usual under the guidance of the National Commission. Work carried out under each of the items like Research, Lecture Programmes, Collection of Source Materials, Publications etc. are summarized below:

4.1 Research Activities

Following projects have been renewed/approved during the period 1981-8 2.

(a) Ancient Period (Six)

(i) Critical edition of the commentary *Ratnaprabhā* on Cakrapani's work on medicine.

(ii) Relations of Babylonian and Indian astronomy.

(iii) Scientific information in the Puranas.

(iv) Interaction between science and society in ancient India with special reference to *Caraka Samhitā* and *Susruta Samhitā.*

(v) Critical edition of *Brhatsamhita* of Varahmihira with a commentary *utpala parimala* of yogi.

(vi) A critical study of flora in *astadhyayi* on Panini.

(b) Medieval Period (Nine)

(i) A comparative study of the Astronomical Instruments of Maharaja Jai Singh and of Central and West Asian School of Astronomy.

(ii) Plant grafting techniques in the Medieval period (1200-1800 A.D.)

(iii) Studies in the Geological aspects of the Medieval land use pattern in Garhwal region (U.P.).

(iv) The study of Zoology in Medieval India (based on Persian sources)

(v) Bibliographical Survey of Science and Technology in India during the Medieval Period from the secondary sources.

(vi) A bibliography of source materials on the science of India.

(vii) Handicraft of Kashmir— papier mache.

(viii) Different colouring agents and their applications in dyeing, printing and painting of cotton goods (c. 1200-1800).

(ix) Investigation in medieval mining and metallurgical teaching and future prospect in Garhwal on the basis of studies of old metal working.

(c) Modern Period (Five)

(i) A scheme on Science in Education in India in the Nineteenth and the first half of the twentieth century.

(ii) Development of Botanical Studies in the 19th century India.

(iii) Some aspects of Indian mathematics in 18th and early 19th century.

(iv) Chronology diary of the development of science & technology in India.

(v) Science & Technology in India in Company Rule (1757-1856).

Three Advisory Boards (Ancient, Medieval & Modern Period) met several times to identify the programme of activities to be taken up under each of these periods.

4.2 Lecture Programme

Academy has been organising lectures on history of science in different universities & institutes by the eminent scholars to creat interest among students, scholars and intellectuals. Two lectures have been delivered during this period in the university of Chandigarh.

Proliferation of modern scientific thought in India during the 18th & 19th centuries.

Nature & extent of source material on History of Science in India.

4.3 Participation in International Conference :

The XVIth International Congress in History of Science was held at the Bucharest University, Romania on August 26–September 3, 1981. Fifty countries from the world over attended the Congress. Eight delegates attended the Congress from India. They were S M R Ansari (Aligarh), A K Bag (Delhi), H C Bhardwaj (Banaras), J K Kamal (Banaras), Hamida Khatoon Naqvi (Delhi), A Rahman (Delhi), S R Rao (Goa), and B V Subbarayappa (Bombay).

Fourteen scientific sessions, 12 Symposia, 7 meetings of specialised topics and 4 commemorations were organized under the main headings.

The International Symposium on 'Scientists and Peace was organised by the Romanian Academy of Science in Bucharest on 4–5 September, 1981. Thirty-four countries including USA, Canada, U.K., France, Germany, USSR participated. A Rahman (Delhi) and A K Bag (Delhi) attended the Symposium.

4.4 Seminars organised by the Academy

(*i*) *Avicenna Millenary Celebration*

The Academy organised seven regional seminars on the millenary celebration of Avicenna followed by an International Seminar held on 2–5 November, 1981. Thirteen foreign participants attended

the seminar—Prof M S Assimov, (USSR) Dr William A Blanpied (USA), Dr G A Russell (UK), Hakim Mohammed Said (Pakistan), Dr S A Rizvi (Australia), Dr Abdul Wazul al-Aziz (Iraq), Dr Taghi Jafori Yagani (Iran), Dr Ahmad Ahmadi (Iran), Prof Salvador Gomez Nogales (Spain), Prof Burchard Brentejee (German), Dr Roshdi Rashed (France), Dr Nejeet-Al-Osman (Kuwait). The seminar was arranged in six sessions viz 'General Observations regarding contributions of Ibn Sina', 'Ibn Sina's contributions of Philosophy', 'Ibn Sina's contributions to Physical, Chemical and Earth Sciences', 'Ibn Sina's contribution to Medicine and Biological Sciences' and 'Ibn Sina's impact on World Sciences and his contemporary relevance'. The seminar ended with Ceremonial Session under the Chairmanship of Mr M Hidayatullah, Vice-President of India.

(*ii*) *Indo-Soviet Collaborative Programme*

The Indo-Soviet bilateral seminar on 'Scientific and Technological exchange between India and Central Asia in the Medieval Period' was held on 7-12 November, 1981 at Nehru Planetarium, Bombay, jointly sponsored by the Indian National Science Academy and Nehru Centre. Nine Soviet delegates and twenty-one Indian delegates participated in the seminar. The seminar was planned in five sessions viz. 'General Ideas and Perspective', 'Astronomy and Mathematics', 'Medicine', 'Technology, Arts & Crafts' and 'Architecture'. Thirty-one papers were presented.

5. BASIC SCIENCE UNIT

5.1 Scheme on Scientific Research and Research Training in Basic Sciences

Grants-in-aid were continued to the on-going projects and to the projects that were approved during the year. A list of projects in operation at various University-Laboratories/and Research Institution on March 31, 1982 is as per *Annexure-V*. The projects to which Academy support was discontinued during the year are listed on *Annexure-VI*.

Two meetings of the Academy Committee for Basic Sciences were held on the 27th July 1981 at INSA premises and on the 27th February 1982 at Osmania University, Hyderabad. About five Group/Experts meetings were also held to discuss the activities in the areas like "Growth of living organisms at high temperature" and "Molecular Cloning Hybridoma Technology" and also for the formulation of inter-institutional and interdisciplinary projects.

Some of the important activities arising out of recommendations of the Advisory Committee are listed below :

(a) **Basic Sciences Seminar at Hyderabad**

The Basic Sciences Project Investigators meeting was held from 26–27 February 1982 at Osmania University, Hyderabad.

In the opening sessions, Prof P N Tandon, Secretary, INSA highlighted the objectives of the Basic Sciences Scheme and the President in his remarks stated that the Academy should put seed money to initiate the activity which can be funded later on by the other scientific bodies. He laid more emphasis on the writing at state-of-art reports especially identifying the gaps and the suggestions for removing the gaps in well defined areas.

During the opening session two invited lectures–one on Additional Genetic Elements by Prof A K Sharma and another on Role of Botanical Gardens in Human Society by Prof B M Johri were arranged.

During this meeting, about 80 project investigators presented their one-year achievements before the members of the Advisory Committee and other experts appointed by the Academy.

The Committee was of the opinion that the outstanding place of work is being done by the investigators under the scheme and this is one of the finest activities in the country which the Academy is conducting.

The Local Chapter of INSA at Hyderabed also arranged a Panel Discussion on Recent Researches in Basics

Sciences and their Relevance to the Country's Development.

(b) State-of-art Report-Preparation

The Advisory Committee laid emphasis on the preparation of state-of-art reports in well delineated areas. Following six areas and Coordinators have been identified for the preparation of state of Art Report :—

(i) Nutrition and Brain Development in India;
Co-ordinator : Prof P N Tandon

(ii) Photo-synthesis and Productivity
Coordinator : Prof P S Ramakrishnan and Dr S K Sinha.

(iii) Animal Physiology
Coordinator : Prof B S Nagabhushanam

(iv) Physics & Technology of Thin Films
Coordinator : Prof K L Chopra

(v) Stratigraphy and Structural History of the Indian Precambrians
Coordinator : Prof B P Radhakrishna

(vi) Instrumentation for Feed-back Studies in Geotechnical Engineering
Coordinator : Prof Dinesh Mohan

(c) Creation of positions of INSA Professorship/Research Fellowship.

The guidlines have been formulated for the award of these positions for which funds will be provided by the Academy. Necessary budgetary provision for the purpose have been sought from the Government (Department of Science & Technology).

5.2 Seminars, Symposia, Conferences, Summer/Winter Schools etc. and Publications Grants to Scientific Societies/Associations.

The Sympasia and Grants Standing Committee met twice during the year, on April 22 and October 17, 1981 at Academy premises. The Seminars/

Symposia etc. to which Academy's financial support was provided are listed at *Annexure-VII.* The Publication Grants to Scientific Societies/Associations for the year 1981-82 are at *Annexure-VIII.*

International Conference on Flood Disasters

The Academy organised an International Conference on Flood Disasters from 3-5 December, 1981 at its premises in collaboration with the Disaster Institute, London and the Gandhi Peace Foundation, New Delhi with Dr M S Swaminathan as Chairman of the Organising Committee.

The Conference was inaugurated by Shri Rao Birendra Singh, Minister for Agriculture and Irrigation and the Inaugural session was presided over by Prof M G K Menon, President, INSA.

At the 3-day conference different aspects of flood disasters were examined. These included flood forecasting and early warning system; flood-control measures; preparedness; adaptation; post-disaster operations; assessment and economic aspects of flood-damage; state/national policies and international cooperation; and experiences of flood disasters in countries prone to periodic floods. In addition to different Indian Scientific and administrative organisations connected to the flood problems, there were also participants from Bangladesh, Thailand, Indonesia, Japan, UK, USA, China and Denmark.

Specific recommendations were formulated by the various groups which will be of help to the organisation/department connected with the flood problems.

6. INTER-ACADEMY EXCHANGE PROGRAMME

6.1 Visits exchanged under INSA-Royal Society Exchange of Scientists Programme.

(a) Indian scientists to UK

(i) Prof A S Paintal, Director, V P Chest Institute, Delhi University, Delhi-110007, visited UK from 29.4.81-18.5.81. Dr Paintal carried out experiments with Prof

F G Walsh in the Department of Physiology & Prof A Iggo in the Department of Veterinary Physiology at London attended the meeting of Royal Society on April 30, 1981. He also visited certain Departments of Physiology in Oxford & London.

(ii) Dr R K Asundi, 12, Om Shanti, 16th Road, Main Avenue, Santa Cruz (West), Bombay-400054, visited UK from 19th May to 1st June, 1981. Dr Asundi attended Royal Society discussion Group on Interstellar Molecules and also visited different Laboratories in London and Oxford.

(iii) Prof G P Talwar, Department of Biochemistry, All India Institute of Medical Sciences, New Delhi-110029 visited UK from 20th May 1981 to 10th June, 1981. Dr Talwar visited Department of Zoology, University College, London, Department of Experimental Psychology, Oxford, National Institute for Medical Research, Mill Hill, London, The Welcome Research Laboratories, Kent, Institute of Animal Physiology, Cambridge, Royal College of Surgeons, London, Institute of Zoology, Regent's Park, London and Department of Immunology, Royal Post Graduate Medical School, Hammersmith Hospital, London.

(iv) Dr S M Chitre, Associate Prof Tata Institute of Fundamental Research, Bombay, visited UK for 5 weeks from 29th June, 1981. During his stay in UK, Dr Chitre visited Department of Mathematics, Leeds and gave a talk there. He also visited Institute of Astronomy, Cambridge and University of Sussex.

(v) Prof J Ganguly, Chairman, Department of Biochemistry, Indian Institute of Science, Banglore-560 012 visited UK from 16th July to 1st August, 81. Prof Ganguly visited the University of Reading, National Institute for Research in Dairing, Reading, National Institute, for Medical Research, London, University College, London, Strangeways Research Laboratory, Cambridge, University of Cambridge and the University of Warwick.

(vi) Dr M N M Rao, Scientist 'E' Radio Science Division, National Phyiscal Laboratory, New Delhi-110012, visited UK for 5 months from 14th September, 1981. Dr Rao mainly worked at the Department of Physics, University College of Wales, Aberystwyth on the Problem of building a rocket payload for measuring the neutral temperature in the height range of 60-100 Km.

(vii) Dr M S Hegde, Lecturer, Structural Chemistry Unit, Indian Institute of Science, Bangalore-560012, Visited UK for 5 months from 29th September, 1981. During his stay, Dr Hegde worked with Prof M W Roberts, Department of Chemistry, University College, Cordiff and also visited University of Cambridge and V G Scientific Ltd., Sussex.

(viii) Dr B A Dasannacharya, Nuclear Physics Division, Bhabha Atomic Research Centre visited UK from 19th October to 21st November, 1981. During his stay in UK, Dr Dasannacharya paid visits to SRC, Rutha-ford & Appleton Laboratories and Materials Physics Division at Oxfordshire.

(ix) Prof D V S Jain, Department of Chemistry, Panjab University, Chandigarh, visited UK from 25th January to 28th February 1982. Prof Jain visited Department of Chemistry, Royal Holloway College, Surrey, University of Strathclyde, Physical Chemistry Laboratory, Oxford University and Davy Faraday Laboratory, London.

(x) Prof G B V Subramanian, Department of Chemistry, University of Delhi visited UK for 5 weeks from 19th February, 1982. He visited University of Sussex, Dyson Perrins Laboratory, Oxford University, Chemical Laboratory, Cambridge and Sheffield University.

(b) British scientists to India

(i) Dr J W Lewis, Department of Zoology, Royal Holloway College, London, visited India from 6th-10th April, 1981. Dr Lewis visited Zoology Department of Aligarh Muslim University and Jodhpur University.

(ii) Dr A H Bittles, Lecturer in Human Biology, Chelsea College, University of London, visited India from 23rd July 1981 to 2nd January, 1982. Dr Bittles worked at Indian Institute of Science, Bangalore and Institute for Research in Reproduction, Bombay during his stay in India.

(iii) Prof J B Goodenough, Department of Inorganic Chemistry, Oxford University, UK, visited India from 8th October to 25th October, 1981. Prof Goodenough Participated in the International School on Synthesis and Crystal Growth and Characterisation of Materials for Energy Conversion & Storage held at National Physical Laboratory, New Delhi and also visited Indian Institute of Science, Bangalore.

(iv) Prof F T Barwell, Department of Mechanical Engineering, University College of Swansea visited India from 27th November, 1981 to 8th January, 1982. Dr Barwell paid visits to Indian Institute of Technology, New Delhi, Indian Institute of Petroleum, Dehradun, Railway Design & Standards Organization, Lucknow, Research & Development Centre of Indian Oil Corporation at Faridabad, & Indian Railways, Bombay.

(v) Prof D Whitteridge, MRC Projects Grants Research Worker, Oxford University, UK visited India from 2nd December, 1981 to 15th January, 1982. Prof Whitteridge had discussions with Prof A S Paintal & Prof G P Talwar, at V P Chest Institute, Delhi and All India Institute of Medical Sciences, New Delhi respectively. He also attended the annual meeting of the Indian Association for Advancement of Science at Mysore from January 2-6, 1982.

(vi) Prof C E Johnson of Experimental Physics, University of Liverpool, UK visited India from 6th to 19th December 1981. Prof Johnson visited Tata Institute of Fundamental Research, Bombay, Indian Institute of Technology, Bombay, National Physical Laboratory, New Delhi. He also attended the International Conference on the Applications of Mossbaüer Effect at Jaipur.

(vii) Dr J R Hinceliffe, Department of Zoology, University College of Wales, Aberystwyth, UK visited India from 8th December, 1981 to 15th January, 1982. He visited Zoology Departments of the University of Rajasthan, University of Poona, University of Lucknow, University of Delhi, Biology Department of Madurai, University and Department of Life Sciences, Jawaharlal Nehru University, New Delhi.

(viii) Five British scientists namely 1. Dr Anne Mclaren 2. Dr Mary F Lyon 3. Dr E M Southern 4. Dr Martin Johnson and 5. Dr R K J Narayan visited India to attend the International Conference on "Condensed Chromatin and the human X Chromosomes" at the Indian Institute of Science, Bangalore, from 14-18 December, 1981.

(xiii) Dr D M Brown, Reader in Organic Chemistry, University of Cambridge, UK visited India from 24th December 1981 to 9th February, 1982. Dr Brown visited Regional Research Laboratory, Hyderabad, Indian Institute of Science, Bangalore, Hindustan Lever Ltd., Bombay, Indian Petro Chemicals Lab., Baroda, CIBA-GEIGY Research Centre, Bombay, Bose Institute, Calcutta, Central Drug Research Institute, Lucknow, Department of Chemistry, Delhi University, and also attended the meeting of the Indian Science Congress at Mysore.

(xiv) Prof S Raghunathan, Aeronautical Engineering Department, Queens University of Belfast, UK visited India for 5 months w.e.f. 1st January, 1982. He visited Indian Institute of Technology, Bombay, Indian Institute of, Technology, Kharagpur and Indian Institute of Science, Bangalore.

(xv) Dr R L Hudson, of Department of Mathematics, Nottingham University, UK visited India from 3rd to 29th January, 1982. Dr Hudson, during his stay in India, paid visits to Indian Institute of Science, Bangalore, University of Hyderabad and Indian Statistical Institute, New Delhi.

(xvi) Dr K Bullough, Reader in Physics, University of Sheeffild UK visited India from 7th January to 8th February, 1982. During his visit, Dr Bullough visited Calcutta University, School of Applied Physics, Banaras Hindu University, Physical Research Laboratory, Ahmedabad, & Indian Institute of Geomagnetism, Bombay. He also attended Space Sciences Symposium at Indian Space Research Organisation, Bangalore.

(xvii) Dr R G Whithead, Director, Dunn Nutrition Laboratory, Cambridge visited India from 9th-15th January, 1982. Dr Whithead's visit was primarily concerned with his participation at the International Workshop entitled 'Biological Nutritional & Environmental Requirements for Physical & Mental Development of the Young Child' Organised by Prof R Rajlakshmi at the M S University of Baroda, where he gave a key-note address at the inauguration of the Workshop.

(xviii) Dr P J Dale, Welsh Plant Breeding Station, Aberystwyth, UK visited India from 14th February to 28th Eebruary, 1982. Dr Dale visited Calcutta University, Delhi University, Punjab Agricultural University, ICRISAT, Hyderabad and National Chemical Laboratory, Pune.

(xix) Dr A Jurand, Sr Lecturer, Institute of Animal Genetics, Edinburgh, UK visited India for 4 weeks from 2nd March, 1982. He visited Departments of Zoology in Poona University, Delhi University and Banaras Hindu University.

(xx) Dr (Miss) Ruth Mary Gatenby visited India for 4 weeks from 18th March, 1982. She visited Central Sheep & Wool Research Institute, Avikanagar, Central Arid Zone Research Institute, Jodhpur, Madras Veterinary College and Tamil Nadu Agricultural University, Coimbatore.

6.2 Visits exchanged under INSA-JSPS Exchange of Scientists Programme

(a) Indian scientists to Japan

(i) Prof T R Anantharaman, Department of Metallurgy,

Banaras Hindu University, Varanasi, visited Japan from 23rd August to 13th September, 1981. He visited Tohoku University, Osaka University and Tokyo University.

(ii) Prof U R Ghatak, Department of Organic Chemistry, Indian Association for the Cultivation of Science, Calcutta, visited Japan from 20th September to 11th October, 1981. He paid visits to Okayama University, Kyoto University, Tokyo University, and some other Institutes.

(iii) Prof A K Sharma, University College of Science, Department of Botany, Calcutta University, visited Japan from 9th September to 26th September 1981. He visited National Institute of Genetics, International Christian University, Hokkaido University, Kyushu University and some other Institutes.

(iv) Dr V S Tomar, Scientist-B, Department of Cryogenics, National Physical Laboratory, New Delhi, visited Japan for 8 months from 1st November 1981. During his stay in Japan he worked in Electrotechnical Laboratory, Sakura-Mura Ibaraki and University of Tsukuba, Sukuramura Ibaraki.

(v) Dr S C Verma, Department of Botany, Punjab University, Chandigarh, visited Japan from 13th December 1981 for 6 months. He visited Botanical Institute, Faculty of Sciences, Hiroshima University, Chiba University, Tohoku University, Tokyo Woman's Christian University, & Gifu University, Kakamigibara Gifu.

(vi) Dr D B Bhaskar Rao, Lecturer, Department of Meteorology & Oceanography, Andhra University, Waltair, visited Japan for a period of 8 months from 6th January, 1982. He worked with Prof Y Mitsuta of Kyoto University.

(vii) Dr A K Sen Sharma, Director, Regional Meteorological Calcutta visited Japan from 27th January 1982 for a period of 6 months. He worked with Prof K Gambo of Geophysical Institute, Universiiy of Tokyo.

(viii) Prof N B K Nair, Head, Department of Aquatic Biology & Fisheries, University of Kerala, visited Japan for 4 weeks from 3rd March, 1982. He visited Universities of Nagasaki, Kyoto, Hiroshima and some other Laboratories.

(ix) Dr P C Mahendru, Assistant Director, National Physical Laboratory, New Delhi, visited Japan from 7th March 1982 for four weeks. He visited Tokyo University and Nagoya University.

(x) Dr B Dasgupta, Reader, Saha Institute of Nuclear Physics, Calcutta, visited Japan from 10th March 1982 for 8 months. He worked at the Institute for Fusion Theory, Hiroshima University.

(xi) Prof R Vijaya Raghavan, Tata Institute of Fundamental Research, Bombay, visited Japan for 3 weeks in March 1982. He visited Universities of Kyoto, Osaka, Kobe, Tohoku and Tokyo.

(b) Japanese scientists to India

(i) Dr T Masuoka, Mechanical Engineering Deparment, Kyushu Institute of Technology, Japan, visited India from 12th July to 19th September 1981. He visited Bangalore University and Indian Institute of Technology, Bombay.

(ii) Dr Y Suezawa, College of Science & Technology, Nihon University, Japan, visited India from 16th July to 12th August 1981. Dr Suezawa visited BARC Bombay, Defence Metallurgical Laboratory, Hyderabad, National Aero. Laboratory, Bangalore, IIT, Madras and some other institutes.

(iii) Dr S Murai, Associate Prof Institute of Industrial Science, University of Tokyo, Japan, visited India from 6th September to 3rd October 1981. He visited Indian Space Research Organisation, Bangalore, National Remote Sensing Agency, Secundrabad, Space Applications Centre, Ahmedabad and some other institutes.

(iv) Prof N Kato, Department, of Crystalline Materials Science, Faculty of Engineering, Magoya University, Japan, visited India from 12th-23rd October, 1981. Dr Kato participated in an International School held at National Physical Laboratory, New Delhi. He also visited Indian Association for the Cultivation of Science, Jadavpur, Calcutta.

(v) Prof I Mikuni, Associate Professor Optholmology Tokai University, Japan, visited India from 27 October to 14th November, 1981. He worked at Dr Rajinder Prasad Centre for Opthalmic Sciences, Ansari Nagar, New Delhi and visited State Institute of Opthalmology at M.D. Eye Hospital Allahabad, Banaras Hindu University, Varanasi and also attended Eye Camp at Sitapur Eye Hospital.

(vi) Prof K Takahashi, Professor of Tokyo Institute of Technology, Tokyo visited India from 22nd November to 30th November, 1981. He attended international workshop on 'Physics of Semi-conductor Devices' at Vigyan Bhavan, New Delhi from 23rd to 26th November, 1981 and also visited Delhi University, and I.I.T., Kanpur.

(vii) Prof T Sugano, Department of Electronic Engineering University of Tokyo, Japan, visited India from 22nd November to 5th December 1981. He participated in the International Workshop on the 'Physics of Semiconductor Devices' at Vigyan Bhavan, New Delhi. He also visited Central Electronic Engineering Research Institute, Pilani and Tata Institute of Fundamental Research, Bombay.

(viii) Prof Y Takahashi, Department of Civil Engineering, University of Tokyo, Bonkyoky, Tokyo visited India from 29th November to 9th December, 1981. During his stay, he visited National Institute of Hydrology, University of Roorkee. He took part in the International Conference on Flood Disasters at Indian

National Science Academy and also visited the Central Water and Power Commission, Ministry of Irrigation.

(ix) Prof K Igaki, Department of Material Science, School of Engineering, Tohoku University, Sendai, Japan visited India from 6th December, 1981 to 30th January, 1982. He visited Indian Institute of Technology, New Delhi, Indian Institute of Technology, Kanpur and Banaras Hindu University, Varansi. He also visited Regional Research Laboratory, Bhubaneshwar & National Metallurgical Laboratory, Jamshedpur.

(x) Prof Y Fujii, Industrial Science, University of Tokyo, Japan, visited India for 40 days from 6th December, 1981. He visited Indian Institute of Technology, New Delhi, Central Scientific Instruments Organisation, Chandigarh, University of Delhi, Delhi, Solid State Physics Laboratory, Delhi, Indian Institute of Technology, Kanpur, Indian Association for the Cultivation of Science, Calcutta and some other Institutions in India.

(xi) Prof A Konno, School of Regional Planning, Toychashi University of Technology, Japan, visited India for 37 days from 10th December, 1981. He visited Jawaharlal Nehru University, New Delhi, Indian Institute of Technology, New Delhi, University of Bombay, Indian Institute of Science, Bangalore and Technical Teachers Training Institute, Adyar, Madras.

(xii) Prof Y Ujihira, Faculty of Engineering, University of Tokyo, Japan, visited India for 2 weeks from 11th December, 1981. During his visit Prof Ujihira attended International Conference on the Application of the Mossbaiier Effect at Jaipur also visited Indian Institute of Technology, Kanpur.

(xiii) Dr Y Kaya, Faculty of Engineering, University of Tokyo, Japan, visited India from 4-14 January, 1982. During his visit Dr Kaya visited Indian Institute of Technology, New Delhi, Department of Science &

Technology, Government of India, New Delhi, and Indian Institute of Management, Bangalore.

(xiv) Dr Y Homma, Head, Department of Becteriology, Kitasato Institute, Tokyo University, Japan, visited India for 2 weeks from 5th January, 1982. Dr Homma visited All India Institute of Medical Science, New Delhi.

(xv) Dr T Nitta, Assistant Professor, Geophysical Institute, Faculty of Science, University of Tokyo, Tokyo, visited India for 2 months from 31st January, 1982. Dr Nitta has visited Indian Meteorological Department, New Delhi and Institute of Tropical Meteorology, Pune.

(xvi) Prof M Doyama, Department of Metallurgy & Material Science, University of Tokyo, Japan, visited India from 3rd February to 25th February, 1982. Prof Doyama visited Banaras Hindu University, Saha Institute of Nuclear Physics, Calcutta, Madras University, Tata Institute of Fundamental Research & Bhabha Atomic Research Centre, Bombay, Rajasthan University, Indian Institute of Technology, Kanpur, Delhi University & Electronics Commission, New Delhi.

6.3 Visits exchanged under INSA-HAS exchange of scientists programme

(a) Indian scientists to Hungary

(i) Prof K. Ramachandra, FNA, school of Mathematics, Tata Institute of Fundamental Research, Homi Bhabha Road, Bombay-400005 from 19-27 July, 1981 for attending Janos Bolyai Mathematical Society Colloquium on Number Theory at Budapest.

(ii) Prof R P Bambah, FNA, Department of Mathematics, Punjab University, Chandigarh, visited Hungary from 19th July to 1st August, 1981 for attending Janos Bolyai Mathematical Society Colloquium of Number

Theory at Budapest. He also visited some other scientific institutions.

(iii) Dr Girjesh Govil, Associate Professor, Tata Institute of Fundamental Research, Bombay, visited Hungry from 4th to 11th October 1981. During his stay, he visited General Research Institute for Chemistry of the Hungarian Academy of Sciences.

(iv) Dr (Mrs) Usha Sabharwal, Assistant Professor, Department of Anatomy, All India Institute of Medical Sciences, New Delhi visited Hungary from 30th October 1981 for two months. She visited Department of Anatomy, University Medical School Pecs, Hungary.

(b) Hungarian Scientists to India

(i) Dr Denes Dudits, Head, Institute of Genetics, Biological Research Centre, Hungarian Academy of Sciences, visited India from 2nd December 1981 to 14th December, 1981. During his stay, he visited Delhi University and Bose Institute, Calcutta.

6.4 Miscelleneous visits

(i) Dr J N Nanda, Executive Secretary, INSA visited Japan from 18th-28th June 1981. Dr Nanda had discussions with Indian Embassy, Tokyo (Dr V K Misra, Science Counsoller) & JSPS officials regarding INSA-JSPS exchange progromme. Dr Nanda also visited Earthquake Research Institute, Tokyo; Ocean Research Institute, Tokyo; Institute of Solid State Physics, Tokyo; Faculty of Marine Science, Tokai; Disaster Prevention Research Institute, Kyoto; Plasma Physics Laboratory, Kyoto.

(ii) Prof P N Tandon, Secretary, INSA and Professor, Department of Neurosurgery, All India Institute of Medical Sciences, New Delhi, visited Thailand from 8th November to 16th November 1981, to attend the third General Assembly Meeting of the IFS held at Chiang Mai University, Chiang-Mai, Thailand.

(iii) Dr V G Bhide, Treasurer, INSA, and Scientists, National Physical Laboratory, New Delhi, visited UK from 28th August to 2nd September, 1981. Dr Bhide attended the International Conference on Solar Energy, and had discussions with Executive Secretary of the Royal Society, Executive Secretary, International Union of Pure and Applied Chemistry Oxford, and Scientists of some other Universities.

(iv) Dr A S Paintal, Vice-President, INSA, and Director, V P Chest Institute, University of Delhi, Delhi, visited Bangladesh from 6th to 12th February 1982 and attended the 9th/7th Annual Science Conference of the Bangladesh Association for the Advancement of Science at Dacca.

(v) Dr C R Krishna Murti, FNA, Director, Industrial Toxicology Research Centre, Lucknow, attended t he International Workshop on Resistance to Insecticides used in Public Health and Agriculture at Colombo, Sri Lanka, from 22nd to 26th February 1982.

6.5 Meetings held

(i) Meeting of the Sub-Committee formed by Inter-Academy Exchange Committee was held on 7th April 1981 in the Academy premises.

(ii) Meeting of Inter Academy Exchange Committee was held on 18th March 1982 in the Academy premises.

6.6 INSA-IFS Funding Programme

During the year under report the following projects have received grants from the International Foundation for Science (IFS), Stockholm.

Sl. No.	*Name of the Scientists*	*Research Scheme*	*Remarks*
1.	Dr T P Subramanian, Zoology Department, University of Madras, Madras-600005	Reproductive Physiology of the Edible Crab Scylla serrata (Forskal) in the Aquacultural Perspective	$ 7,200
2.	Dr P Geervani, Prof of Foods and Nutrition, College of Home Science, A P Agricultural Uuiversity, Hyderabad-500004	Nutritional Quality of Legume Vegetables	$ 4,680
3.	Dr V R Muthukkaruppan, School of Biological Sciences, Madurai Kamaraj University, Madurai.	An Integrated approach to Frogculture	$ 4,000 (GR)
4.	Dr Rita Adiyodi Vatsyana, Centre of Invertebrate Reproducton, Calicut University, Kerala-673635	Edible Crabs and Prawns : Studies on Induced breeding and culture of juveniles.	$ 9,750 (GR)
5.	Dr B Mukherjee, Dr B C Roy Post Graduate Institute of Basic Medical Sciences, Calcutta University, Calcutta	Chemical and Pharmacological Studies on three Indian medicinal plants.	$ 10,000 (GR)

7. INDO-SOVIET COLLABORATIVE PROGRAMME

The following activities were performed under the Indo-Soviet Collaborative Programme :

7.1 Projects

The activities under Indo-Soviet project have considerably increased. One more area has been identified and included in the list of existing 25 projects operating under this programme raising the total number of Indo-Soviet projects to 26 (*Annexure-IX*)

7.2 Symposium

During the period under report following Symposia have been organised in India and USSR under the Collaborative Programme.

(i) The II Indo-Soviet Symposium on 'Electro-Chemistry' was held at Mosow from 15-18 June 1981. A team of five Indian scientists led by Dr H V K Udupa, Dircctor, Central Electrochemical Research Institute, Karaikudi participated in the Symposium.

(ii) The IV Indo-Soviet Earth Science Symposium 'Geology and Useful minerals of precambrian stage' was held at Moscow from 20th September to 4th October 1981. A team of eight Indian scientists led by Dr F Ahmad, FNA, participated in the Symposium.

(iii) An Indo-Soviet Symposium on 'History of Science' was held at Bombay from 7-12 November 1981 with the Joint participation of Indian and Soviet Scientists. A team of eight Soviet scientists led by Academician A S Asimov, President, Tajik Academy of Sciences, Dushanbe participated in the Symposium.

7.3 Meetings

(i) A meeting of participating institutions (Indian side) of the Indo-Soviet Project 'Basic Hydrogeology' was held on 25th July 1981 in the Academy.

(ii) Second meeting of the Steering Committee for Indo-Soviet Collaborative Programme was held on 30th October, 1981 in the Academy.

(iii) A meeting of the Steering Committec for Indo-Soviet Collaborative Programme was held on 18th March, 1982, in the Academy.

(iv) A meeting of the Inter-Academy Exchange Committee was held on 18th March 1982 in the premises of the Academy to discuss and approve the matters related to Indo-Sovict Collaborative programme alongwith other matters of Inter Academy Exchange Programme.

7.4 Visit exchanged under Indo Soviet Collaborative Programme during 1981-82

(a) Indian scientists to USSR

(i) Dr S C Tonwar, Reader, Tata Institute of Fundamental Research, Bombay, visited USSR from 21 April to 6 May 1981.

(ii) Prof P S Goel, Professor of Chemistry, Department of Chemistry, Indian Institute of Technology, Kanpur, visited USSR for one month from 18th June, 1981.

(iii) Dr S K Arora, Reader, Department of Physics, Sardar Patel University, Vallabh Vidyanagar, Gujarat visited USSR for four months from 5th July 1981.

(vi) Dr M K V Bappu, Director, Indian Institute of Astrophysics, Bangalore, visited USSR for 12 days from 30 July 1981.

(v) Prof K M V Apparao, Tata Institute of Fundamental Research, Bombay, visited USSR for three weeks from 25th August 1981.

(vi) Dr A K Bag, Project Coordinator, Indian National Science Academy, New Delhi, visited USSR for four days from 6 to 9 September, 1981.

(vii) Sh K C Mittal, Scientific Officer, Plasma Physics Section, Bhabha Atomic Research Centre, Bombay, visited USSR for one week, from 13th September 1981 to attend Xth Europeon Conference on Control Fusion and Plasma Physics at Moscow.

(viii) Prof K Ramachandra, School of Mathematics, TIFR, Bombay, visited USSR for ten days from 13th September 1981 to attend conference at Moscow.

(xi) Dr R G Rastogi, Director, Indian Institute of Geomagnetism, Bombay, visited USSR for two weeks from 15th September 1981.

(x) Prof S Chandrasekhar, Liquid Crystals Laboratory, Raman Research Institute, Bangalore, visited USSR for one month from 3rd October 1981.

(xi) Prof G Govil, Tata Institute of Fundamental Research, Bombay, visited USSR for two weeks from 21 September to 4 October 1981.

(xii) Prof P T Narasimhan, Department of Chemistry, Indian Institute of Technology, Kanpur, visited USSR for one month from 20 September 1981.

(xiii) Dr S P Magu, Division of Microbiology, India Agricultural Research Institute, New Delhi, visited USSR for three months from 20th October 1981.

(xiv) Dr Alok R Ray, Centre for Biomedical Engineering, Indian Institute of Technology, New Delhi, visited USSR for two months since 16th March 1982.

(xv) to (xix) A team of five Indian scientists led by Dr H V K Udupa, Director, Central Electrochemical Research Institute, Karaikudi participated in the Second Indo-Soviet Symposium on 'Electrochemistry' held at Moscow from 15-18 June 1981. The other members were Prof H C Gaur, Delhi University, Delhi, Prof Hira Lal, Indian Institute of Technology, Bombay, Dr S R Rajagopalan, NAL, Bangalore and Prof S R Rangarajan Indian Institute of Science, Bangalore.

(xx) to (xxvii) A team of eight Indian scientists led by Dr F Ahmed, FNA, Srinagar, participated in the Fourth Indo-Soviet Earth Science Symposium on 'Geology and useful minerals of Precambrian Stage' at Moscow from 20 September to 4 October 1981. The other members were Prof Supriya Roy, Jadavpur University, Calcutta, Prof A Mookherjee, Indian Institute of Technology, Kharagpur, Dr S M Mathur, Dr S K Babu, University of Saugar, Sagar, Dr S M Zainuddin,

AMU, Aligarh, Mr J Bhattacharjee, GSI, Jaipur and Prof A K Sinha, Wadia Institute of Himalayan Geology, Dehradun.

(b) Soviet scientists to India

(i) Dr R G Dzhamalov, Institute of Water Problems, Moscow visited India for one month from 20 April to 19 May 1981. During his stay in India for the above period Dr Dzhamalov visited Indian Institute of Technology, New Delhi, IndiaMeteorological Department, New Delhi, NGRI. Hyderabad, Physical Research Laboratory, Ahmedabad and Roorkee University, Roorkee.

(ii) Dr A A Novikov, Steklov Mathematical Institute, Academy of Sciences of USSR, Moscow visited Indian Statistical Institute, Delhi, Calcutta and Bangalore Centre during his stay in India from 25 April to 23 May 1981.

(iii) Dr V I Makarov, Scientist, Main Astronomical observatory, Leningrad, USSR visited Indian Institute of Astrophysics, Bangalore, Observatory at Kodaikanal and Uttar Pradesh State Observatory, Nainital during his stay in India for three months from 25th April 1981.

(iv) Dr (Mrs) A A Shpitalanaya, Scientist, Main Astronomical Observatory, Leningrad, USSR visited Indian Institute of Astrophysics, Bangalore, Observatory at Kodaikanal and Uttar Pradesh State Observatory, Nainital during her stay in India for three months from 25th April, 1981.

(v) Prof O B Ptitsyn, Physico-Technical Institute Moscow visited India for one month from 20 May to 18 June. 1981. Prof Ptitsyn visited Tata Institute of Fundamental Research, Bombay, Indian Institute of Science. Bangalore, Post Graduate Centre (University of Madras), Tiruchi, University of Madras, Madras. Regional Research Laboratory, Hyderabad and JNU. New Delhi during the period of his stay in India.

(vi) Dr A A Alexandrov, Institute of Molecular Genetics of USSR Academy of Sciences, Moscow visited India for two weeks from 20 May to 2nd June 1981, Dr Alexandrov visited Delhi University, IIT Delhi, TIFR, Bombay, Indian Institute of Science, Bangalore during his stay in India.

(vii) Dr E V Ananiev, Institute of Molecular Genetics of USSR Academy of Sciences, Moscow visited India for two weeks from 20 May to 2nd June 1981. Dr Ananiev visited Delhi University, Indian Institute of Technology, Delhi, Tata Institute of Fundamental Research, Bombay, Indian Institute of Science, Bangalore during his stay in India.

(viii) Dr Z P Kaushpedas, Institute of Chemistry and Chemical Technology, Academy of Sciences of Lithuanian, USSR visited Central Electrochemical Research Institute, Karaikudi, Indian Institute of Science, Bangalore, and Indian Institute of Technology, Kharagpur during his one and half months stay in India from 15th October 1981.

(ix) Dr B M Shustov, Scientific Secretary of the Astronomical Council of the USSR Academy of Science, Moscow visited Indian Institute of Astrophysics, Raman Research Institute, Bangalore and Tata Institute of Fundamental Research, Bombay for a period of one month from 18th November to 17th December, 1981.

(x) Dr M S Khain, Institute for Physical Problems, Moscow visited University of Delhi, Delhi, Indian Institute of Science, Bangalore, Indian Institute of Technology, Madras, Tata Institute of Fundamental Research, Bombay, during his stay for one month from 22nd November 1981.

(xi) Prof Y M Kagan, Solid State Physics Laboratory of the I V Kurchatove Institute of Atomic Energy Moscow visited National Physical Laboratory, Uni-

versity of Delhi, Delhi, Indian Institute of Technolog and Tata Institute of Fundamental Research Bomba and attended International Conference on 'Mossbaue Effect' at Jaipur during his stay from 7 to 19 Decem ber 1981.

(xii) Dr P A Alexandrov, Solid State Physics Laborator of the I V Kurchatov Institute of Atomic Energ Moscow visited National Physical Laboratory, Uni versity of Delhi, Delhi, IIT and Tata Institute o Fundamental Research, Bombay and attende International Conference on 'Mossbauer Effect' a Jaipur during his stay from 7 to 20 December 1981.

(xiii) Dr Y V Maximov, Institute of Chemical Physics Moscow visited National Physical Laboratory University of Delhi, Delhi, IIT and Tata Institute o Fundamental Research, Bombay and attended Inter national Conference on 'Mossbauer Effect' at Jaipu during his stay from 7 to 20 December, 1981.

(xiv) Prof A S Davidov, Director, Institute of Theoretica Physics of Ukranien Academy of Sciences, Kie visited India for one week from 12 to 19th Decembe 1981 to attend the International Conference o 'Living State' at AIIMS, New Delhi from 13-1 December 1981.

(xv) Prof I S Lyubutin, Institute of Crystalography, USS Academy of Sciences, Moscow is currently visitin India for a period of one month since 7th Decembe 1981. He visited NPL, University of Delhi, Delhi IISC, RRI, Bangalore, University of Calcutta, Cal cutta and attended Iniernational Conference o 'Mossbauer Effect' at Jaipur from 14—18 Decembe 1981.

(xvi) Prof V N Kristnikov, Institute of Physics of the Earth Moscow visited D. S. T., India Meteorologica Department, New Delhi, NGRI, Hyderabad an Central Water and Power Research Station. Poon

during his stay in India for three weeks from 11 January to 2 February 1982.

(xvii) Prof I L Nersesov, Institute of Physics of the Earth, Moscow visited DST, India Meteorological Department, New Delhi, NGRI, Hyderabad and Central Water and Power Research Station, Poona during his stay in India for three weeks from 11 January to 2 February 1982.

(xviii) Dr A Y Sidorin, Institute of Physics of the Earth, Moscow visited DST, India Meteorological Department, New Delhi, NGRI, Hyderabad and Central Water and Power Research Station, Poona during his stay in India for three weeks from 11 January to 2 February 1982.

(ix) Prof A N Sultankhojaev, Institute of Seismology Uzbeck Academy of Sciences, Tashkent, USSR visited DST, Indian Meteorological Department, New Delhi, NGRI, Hyderabad and Central Water and Power Research Station, Poona during his stay in India for three weeks from 11 to 30 January, 1982.

(xx) Dr R D Gavrilin, V. I. Vernadsky Institute of Geochemistry and Analytical Chemistry of USSR Academy of Sciences, Moscow visited India for a period of three months since 30 December, 1981. He visited NGRI, Hyderabad, IISC, Bangalore and University of Madras, Madras.

(xxi) Prof A S Holevo, Steklov Mathematical Institute of USSR Academy of Sciences, Moscow visited Indian Statistical Institute, Calcutta, Delhi and its Bangalore Centre during his stay in India for one month from 20 January 1982.

(xxii) Prof A S Marfunin, Institute of Ore Geology, Petrography, Mineralogy, Moscow visited India for a period of one month since 20 February 1982. He visited

TIFR, BARC, Bombay, IACS, Calcutta and IIT Kanpur.

(xxiii) Dr (Mrs) A K Lavrukhina, V. I. Vernadsky Institute of Geochemistry and Analytical Chemistry of Academy of Sciences USSR visited India for a period of one month since 20 February 1982.

(xxiv) Dr V A Alexeev, V I Vernadsky Institute of Geochemistry and Analytical Chemistry of Academy of Sciences USSR visited India for a period of one month since 20 February 1982.

(xxv) Dr G B. Bokij. Chief of X-ray Crystallography Laboratory, Institute of Ore Geology, Petrography, Mineralogy and Geochemistry Academy of Sciences, USSR visited NPL, University of Delhi, Delhi, Jadavpur University, IACS, Calcutta, IISC, Raman Research Institute, Bangalore during his stay in India for one month from 27 March 1982.

(xxvi) Prof T A Azlarov, Head, Division of Mathematical Statistics at Institute of Mathematics, Uzbek Academy of Sciences, Tashkent USSR visited Indian Statistical Institute, Calcutta, Delhi and its Centre at Bangalore and Tata Institute of Fundamental Research, Bombay during his stay in India for one month from 27 Marth, 1982.

(xxvii) Dr M Mirvaliev, Scientist, Division of Mathematical Statistics at Institute of Mathematics, Uzbek Academy of Sciences, Tashkent USSR visited Indian Statistical Institute, Calcutta, Delhi and its Centre at Bangalore and Tata Institute of Fundamental Research, Bombay during his stay in India for one month from 27 March, 1982.

(xxviii to xxxv) A team of eight Soviet Scientists led by Academician A S Asimov, President Tajik Academy of Sciences, Dushenbe, USSR participated in the Indo-soviet Symposium on 'History of Science' held at Bombay from 7-12 November 1981. The other members were

Prof M M Khairullayev, Prof. Yu N Nuraliv, Prof. S Kh Sirarzhdinov, Prof. A I Volodosky, Prof. Yu S Vcronkov, Prof T B Romanc Vskapa and Mrs. V I Tkachenko.

8 INTERNATIONAL COUNCIL OF SCIENTIFIC UNIONS (ICSU)

8.1 Delegations to ICSU-sponsored conferences:

The Academy sponsored the delegation of 95 scientists to 36 conferences sponsored by ICSU and its affiliated bodies. Particulars regarding these scientists may be seen in *Annexure-X.*

8.2 Financial support for non-ICSU conferences:

The Academy extended financial assistance to 84 scientists for participation in 82 international conferences abroad. Particulars of these scientists may be seen in *Annexure-XI.*

8.3 INSA-COSTED Travel Fellowship Scheme

The Academy selected 14 scientists under INSA-COSTED Travel Fellowship Scheme. Particulars of these scientists may be seen in *Annexure-XII.*

8.4 Constitution/Reconstitution of National Committees

After reconstitution of various National Committees 1981-84, in March 1981, the Academy constituted the following new National Committees:

(i) National Committee for Inter-Union Commission on the Application of Science to Agriculture, Forestry and Aquaculture (CASAFA)

(ii) World Climate Research Programme (WCRP)

8.5 Meetings of the National Committees

Following meetings were held:

1. Meeting of ICSU National Committees	19.3.82
2. National Committee for COSTED	9.11.81
3. National Committee for IMU	27.11.81
4. National Committee for IUGG	12. 1.82
5. National Committee for ICL	14. 1.82

6. National Committee for IUB	21. 1.82
7. National Committee for SCOSTEP	6. 2.82
8. National Committee for COSPAR	6. 2.82
9. National Committee for IAU	10. 2.82
10. National Committee for URSI	19. 2.82
11. National Gommittee for IUIS	1. 3.82
12. National Committee for IUPAB	6. 3.82
13. National Committee for IUGS	11. 3.82

8.6 Annual Subscription to International Unions/Committees

Annual Subscription towards 1981 was paid to the following international Unions/Committees:

Name of the Union/Committee	*Annual Subscription*
International Council of Scientific Unions (ICSU)	$ 17136/-
International Astronomical Union (IAU)	SF 2930/-
International Union of Biochemistry (IUB)	$ 1500/-
International Union of Biological Sciences (IUBS)	$ 1000/-
International Union of Pure and Applied Chemistry (IUPAC)	$ 4428/-
Internatioual Union of Crystallography (IUGr)	$ 300/-
Scientific Committee on Problems of the Environment (SCOPE)	$ 900/-
International Union of Geodesy and Geophysics (IUGG)	$ 5600/-
International Geographical Union (IGU)	$ 675/-
International Union of Geological Sciences (IUGS)	$ 3600/-
International Union of History and Philosophy of Science (IUHPS)	$ 100/-
International Union of Theoretical and Applied Mechanics (IUTAM)	$ 690/-
International Mathematical Union (IMU)	SF 2400/-
International Union of Nutritional Sciences (IUNS)	SF 2400/-
Scientific Committee on Oceanic Research (SCOR)	$ 1600/-

International Union of Pure and Applied Physics (IUPAP)	$ 1600/-
International Union of Pure and Applied Biophysics (IUPAB)	$ 550/-
International Union of Pharmacology (IUPHAR)	$ 1000/-
International Union of Radio Science (URSI)	$ 2080/-
International Committee on Solar Terrestrial Physics (SCOSTEP)	$ 1000/-
Committee on Space Research (COSPAR)	FF 28600/-
Committee on Data for Science and Technology (CODATA)	$ 2400/-
International Union of Immunological Sciences (IUIS)	$ 238.50
World Climate Research Programme (WCRP)	$ 1000/-

9. FINANCE

9.1 Grant Received during 1981-82 (in lakhs)

Non Plan	33.35
Plan	40.50
Young Scientist's Programme	2.50
	76.35

ICSU Subscription Rs. 4.80

9.2 Estimated Income & Expenditure for 1982—83 (in lakhs)

Non Plan	40.80
Plan	53.25
Award for Young Scientists	3.50
	97.55

ANNEXURE I

FELLOWS ELECTED (1981)

(Effective from 1st January 1982)

•

1. Professor K P Abraham, Department of Metallurgy, Indian Institute of Science, Bangalore-560012.
2. Professor I S Bhatia, Professor of Chemistry and Biochemistry, Punjab Agricultural University, Ludhiana-141004.
3. Professor K S Bilgrami, Professor & Head, Post-Graduate Botany Dept., Bhagalpur University, Bhagalpur-812007.
4. Professor A K Bose, Professor of Chemistry, Stevens Institute of Technology, Hoboken, New Jersey, USA.
5. Dr M N Bose, Director, Birbal Sahni Institute of Palaeobotany, Lucknow-226007.
6. Professor V L Chopra, Professor of Genetics, Indian Agricultural Research Institute, New Delhi-110012.
7. Dr A G Datta, Assistant Director, Indian Institute of Chemical Biology, Calcutta-700032.
8. Professor B P Ghildyal, The Ford Foundation, 55, Lodi Estate, New Delhi-110002.
9. Professor J K Ghosh, Professor of Statistics, Indian Statistical Institute, 208, Barrackpore Trunk Road, Calcutta-700035.
10. Dr S K Jain, Director, Botanical Survey of India, Howrah-711103.
11. Professor P Krishna, Professor of Physics, Banaras Hindu University, Varanasi-221005.
12. Professor C K Majumdar, Palit Professor of Physics, Calcutta University, 92, Acharya Prafulla Chandra Road, Calcutta-700009.
13. Professor K N Mehrotra, Professor of Entomology, Division of Entomology, Indian Agricultural Research Institute, New Delhi.
14. Professor S S Merh, Professor of Geology, M S University of Baroda, Baroda-390002.
15. Professor Ishwar Prakash, Professor of Eminence, Central Arid Zone Research Institute, Jodhpur-342001.
16. Professor Gopal Prasad, Associate Professor, Tata Institute of Fundamental Research, Bombay-400005.

17. Professor V Rajaraman, Professor of Electrical Engineering and Computer Science, Indian Institute of Technology, Kanpur-208016.

18. Dr N Ramanathan, Acting Director, Central Leather Research Institute, Adyar, Madras-600020.

19. Professor S K Rangarajan, Dept. of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore-560003.

20. Professor R G Rastogi, Director, Indian Institute of Geomagnetism, Colaba, Bombay-400005.

21. Professor N Rudraiah, Professor of Mathematics, Central College, Bangalore University, Bangalore-560011.

22. Professor S S Sandhu, Dept. of Chemistry, Guru Nanak Dev University, Amritsar-143005.

23. Professor P S Sastry, Professor of Biochemistry, Indian Institute of Science. Bangalore-560012.

24. Dr A G Sathyanesan, Senior Research Officer, Centre of Experimental Medicine and Surgery, Institute of Medical Sciences as Banaras Hindu University, Varanasi-221005.

25. Professor S M Sengupta, Professor of Geology, Indian Institute of Technology, Kharagpur-721302.

26. Prof. C S Vaidyanathan, Professor of Biochemistry, Indian Institute of Science, Bangalore-560012.

27. Professor M N Viswanathiah, Vice-Chancellor, Bangalore University, Jnana Bharati, Bangalore-560056.

ANNEXURE II

FOREIGN FELLOWS ELECTED (1981)

(Effective from 1st January 1982)

1. Professor J R Arnold, Professor of Chemistry and Director California Space Institute, B-017, University of California, San diego, La Jolla, California-92093, USA.
2. Professor E S Ayensu, Director, Office of Biological Conservation, Smithsonian Institution, Washington DC, USA.
3. Professor C F Chagas, Depto. de Anatomia—Bloco 30, Cidade Universitaria, Caixa Postal 4365, 01000-Sao Paulo-Brasil.
4. Professor M A El-Kassas, Professor of Botany, Faculty of Science, University of Cairo, Giza, Egypt.
5. Professor A Hewish, Professor of Radioastronomy, University of Cambridge, U K.
6. Professor Y A Ovchinnikov, Director, Shemyakin Institute of Bio-organic Chemistry of the USSR Academy of Sciences, U1. Vavilova, 32, GSP-1 Moscow, 117988, V-334, USSR.
7. Dr C K N Patel, Director, Physical Research Laboratory, Bell Laboratories, Murray Hill, N J 07974 USA.
8. Professor J A Ratcliffe, Director, Radio and Space Research Station, Slough, England.

ANNEXURE III

LIST OF SCIENTISTS SELECTED FOR THE AWARD OF SCIENCE ACADEMY MEDALS FOR YOUNG SCIENTISTS FOR THE YEAR 1981

1. Dr B K Chaudhuri (b. 12. 11. 1949), Magnetism Department, Indian Association for the Cultivation of Science, Calcutta.
2. Shri R N Chatterji (b. 29. 4. 1950), Department of Zoology, University of Calcutta, Calcutta.
3. Dr U C Das (b. 1. 3. 1949), National Geophysical Research Institute, Hyderabad.
4. Dr J B Joshi (b. 28. 5. 1949), Department of Chemical Technology, University of Bombay, Bombay.
5. Dr C P Katti (b. 12. 8. 1952), Department of Mathematics, Indian Institute of Technology, New Delhi.
6. Dr B D Kulkarni (b. 5.5.1949), Chemical Engg. Division, National Chemical Laboratory, Pune.
7. Dr V K B Kota (b. 31.3. 1951), Physical Research Laboratory, Ahmedabad.
8. Dr A C Kunwar (b. 14. 3. 1949), Raman Research Institute, Bangalore.
9. Dr A K Lala (b. 13. 1. 1950), Dept. of Chemistry, Indian Institute of Technology, Bombay.
10. Dr (Mrs.) Sukhada Mohandas (b. 3. 6. 1951), Sugarcane Breeding Institute, Coimbatore.
11. Dr R Nagendra (b. 23. 9. 1953), Dept. of Geophysics, Osmania University, Hyderabad.
12. Shri Prakash Nagarkatti (b. 5. 7. 1952), Dept. of Microbiology, Defence Research & Development Estt., Gwalior.
13. Dr R Nagaraj (b. 10. 2. 1953) Centre for Cellular and Molecular Biology, Regional Research Laboratory, Hyderabad.
14. Shri D Pain (b. 14. 10 1954), Dept. of Enzyme Engineering, Indian Institute of Experimental Medicine, Calcutta.
15. Dr S M Srivastava (b. 2. 3. 1953), Stat. Mathematics Division, Indian Statistical Institute, Calcutta.

16. Dr K B Sainis (b. 2. 10. 1949), Medical Division, Bhabha Atomic Research Centre, Modular Laboratory, Bombay.

17. Dr Kuldeep Singh Sidhu (b. 20. 3. 1951), Dept. of Zoology, Punjab Agricultural University, Ludhiana.

18. Dr R D Tripathi (b. 5. 7. 1953) Natural Pesticide Laboratory, Botany Dept., University of Gorakhpur, Gorakhpur.

19. Dr K P R Vittal (b. 6. 8. 1949) All India coordinated Research Project for Dryland Agriculture, 2-2-58/60 Amberpet, Hyderabad.

20. Dr R L Yadav (b. 11. 11. 1949) Department of Agronomy & Soils, Central Institute of Medicinal & Aromatic Plants, Kukrails, Lucknow.

ANNEXURE IV

REPORT OF THE ACTIVITIES OF THE INSA LOCAL CHAPTERS

There are 15 Local Chapters. Reports have been received only from four of these.

Bombay

1. A meeting of the Bombay Local Chapter was announced for September 25, 1981. However because of extremely poor response the meeting was postponed.

2. The postponed meeting of the Local Chapter was held on October 20, 1981 at the University, Department of Chemical Technology at the invitation of Dr M M Sharma. 16 Fellows attended the meeting. Two of the decisions taken at this meeting relate to the following:

   (a) At the request of the Bombay Centre of the Association of College Going Scientists, Fellows present agreed to extend to the Association all possible help in organising lectures and undertaking projects.

   Subsequently the President and Secretary of the Bombay Centre of the Indian Association of College Going Scientists approached Dr Daniel with specific requests and he put them in touch with the right people for necessary assistance.

   (b) It was also decided to organise two different lecture series one at the Matunga area and the other at the Nehru Centre. However no meeting has been held so far.

3. Many Fellows of the Academy took part in the Indo-Soviet Seminar on Scientific and Technological Exchanges between Soviet Central Asia and India in the Medieval Period at the Nehru Planetarium on November 7, 1981. This Seminar was organised under the Indo-Soviet collaboration programme between INSA and the USSR Academy of Sciences.

Calcutta

Lectures and meetings arranged in the Calcutta Chapter

I) Lectures (General)

Speaker	*Topic*	*Date & place*
Professor M B Wilkins Dept. of Botany, Univ. of Glasgow (UK)	The mechanism of geotropic response of roots.	10.1.1982 Dept. of Botany, Univ. of Calcutta Seminar room
Dr T Caspersson, FRS Karolinska Nobel Institute Stockholm (Sweden)	Use of biophysical methods in the detection of genotypic changes.	12.1.1982 –do–
Professor H Rees, FRS Agricultural University Aberystwyth (UK)	Genetics and Society	14.1.1982 –do–
Professor E S Bevan Dept. of Applied Biology Queen Mary College London (UK)	Yeast viruses—their nature and inter-relations with the host cell	17.1.1982 –do–
Professor S K Dutta Department of Botany Howard University Washington, USA.	Application of Recombinant DNA technology in crop industry.	21.1.1982 –do–
Professor R L Kirk The John Curtin School of Medical Research, Canberra (Australia)	Genetics of Diabetes	9.2.1982
Dr S K Chattopadhyay National Cancer Institute Bethesda, Maryland (USA)	Structure of murine leakeemia viral sequences in mouse genome	3.3.1982 –do–
Dr T N Khoshoo, FNA Director, National Botanical Research Institute, Lucknow. (now : Secretary to the Govt. of India, Department of Environment, New Delhi.)	New Flowers from old	RK Mission of Institute of Culture 30.3.1982

II. Special lectures and meetings

(1) INSA endowment lecture (founded by the late G P Chatterjee and Mrs Suniti Chatterjee).

Total—eight lectures, with attendance of between 150 to 200 in each, some held in collaboration with other societies.

Delivered by Dr SC Bhattacharyya, FNA, Director Bose Institute on 26.11.1981 at the Kennedy Hall on "Perfumery Chemicals from Animal Sources", attended by 270 visitors and fellows.

(2) Lecture for undergraduate students at the Lady Brabourne College on "Cancer" by Dr G Talukder on April 1981.

(3) Inauguration of a workshop on "Cell and chromosome methodology" on 29.3.1982, jointly with the Centre of Advanced Study, Dept. of Botany, University of Calcutta in the Kennedy Hall with Keynote Address by Dr T N Khoshoo, FNA. More than 250 visitors and fellows attended the inauguration.

Madras

The INSA Endowment Lecture, in memory of Professor K Rangadhama Rao, delivered by Professor N Narahari Rao, an eminent spectroscopist of the Department of Physics of Ohio University, Columbus was arranged under the auspices of the Madras Local Chapter in December 1981. Following this, a Symposium on the Chemistry of Life Processes was arranged in collaboration with the Indian Chemical Society, on 26th January 1982, when distinguished Chemists, Biologists and Biochemists as well as postgraduate students from various colleges took part.

Roorkee

Four meetings of the Chapter were arranged.

Offer was made to organize a committee of Science Teachers of various colleges to carry out certain programmes such as science exhibition, essay competition, science quiz etc. Unfortunately these programmes could not take up during this year. A special lecture was arranged by the chapter on Satellite Communication by Professor S N Mitra, FNA.

ANNEXURE V

LIST OF ON-GOING PROJECT (AS ON 31st MARCH 1982)

Sl. No.	*Title of the project*	*Name of Investigator(s) and Institution(s)*	*Implementation date*
1	2	3	4
MATHEMATIES			
1.	Studies in Nonlinear effects in the problems of wave propagation and stabilities in semi-conductors with plasma stream.	PROF. D K SINHA Dept. of Mathematics Jadavpur University Calcutta-700032	16-1-197
2.	Non-linear phenomena in plasma waves and instabilities.	DR K M SRIVASTAVA Dept. of Mathematics University of Roorkee Roorkee	1-11-197
3.	Nonlinear waves in plasma.	DR R K CHAJLANI Lecturer School of Studies in Physics Vikram University Ujjain (M.P.)	21-7-197
4.	Theoretical and experimental investigations of transition from laminarity to turbulence in flows part porous media.	DR M N CHANNABASAPPA Professor & Head Department of Mathematics Karnataka Regional Engineering College P O Srinivasanagar-574157 Surathkal (Karnataka State)	1-4-198
PHYSICS			
5.	Theoretical and experimental investigations on pn junction solar cells and MOS solar cells.	PROF. L S KOTHARI/ PROF. G P SRIVASTAVA Dept. of Physics Delhi University Delhi-110037	Dec. 19

	2	3	4
5.	Photo-electro-Chemical and thermal storage and conversion of solar energy.	PROF. SURESH CHANDRA/ PROF. P KRISHNA Dept. of Physics Banaras Hindu University Varanasi-5	1-1-1980
7.	Study of solid electrolytes and development of solid state batteries.	DR D N BOSE Materials Science Centre Indian Institute of Technology Kharagpur-721302	24-10-1979
8.	Investigation of more efficient photo-galvanic cells.	PROF. V R KRISHNAN Prof. & Head Dept. of Chemistry Sri Venkateswara University College of Sciences Tirupati-517502	24-1-1980
9.	Splat quenched versus vapour deposited amorphous materials-preparation and characterizat.on.	DR V D VANKAR Thin Film Laboratory Physics Department Indian Institute of Technology New Delhi-110029	23-7-1979
10.	Studies on the ionization rates and drift velocities of electrons and holes in polar semi-conductors— its relevance in IMPATT devices made of polar semi-conductors.	DR SURENDRA SINGH Lecturer in Physics Udai Pratap (P/G) College Varanasi-221002	
11.	Physics and Chemistry of Oxide Surfaces.	DR A BANERJEE Thin Film-Solid State Technology Cell Department of Physics Indian Institute of Technology Hauz Khas New Delhi-110029	
12.	,,	DR M S Hegde Lecturer Solid State and Structural Unit Indian Institute of Science Bangalore-560012	

1	2	3	4
13.	Physics and Chemistry Oxide Sources.	DR R BADRINARAYAN Physical Chemistry Division National Chemical Laboratory Pune-411008	
14.	Coherent Information Processing by using Laser Light as the Signal Carrier.	PROF. R S KASANA Dept. of Physics University of Indore Indore-452001	
CHEMISTRY			
15.	Design and fabrication of photo acoustic spectrometer.	PROF. C N R RAO] DR P GANGULY Solid State & Structural Chemistry Unit Indian Institute of Science Bangalorc-560012	26-2-1979
16.	Solid State Chemistry of mixed metal oxide catalysts Bismuth molybdate.	PROF. R P RASTOGI Department of Chemistry Faculty of Science University of Gorakhpur Gorakhpur-273001	Feb. 1979
17.	Relationships of composition and structure with the electric and magnetic properties of spinel-like forrites.	DR H V KEER Department of Chemistry Indian Institute of Technology Bombay	April, 1979
18.	Structural studies of some bio-coordination compounds of phosphate and schiffbase groups containing co-enzymes —A mechanistic study of pyridoxal phosphate dependent enzymatic reactions.	DR H MANOHAR Department of Inorganic & Physical Chemistry Indian Institute of Science Bangalore-560012	8-1-1980
19.	Photoinduced catalytic reactions on semi-conductor oxides (chemical effects of light and storage of energy modification of the oxide material).	PROF. J C KURIACOSE Professor of Chemistry Indian Institute of Technology Madras	29-8-197

1	2	3	4
20.	Three-dimensional x-ray Diffraction and solid state studies on crystal structure determination of substances of organometallic, polypetides, biologically active compounds and electronic materials.	DR P C JAIN Reader Department of Chemistry Kurukshetra University Kurukshetra	21-9-1979
21.	Search for new pesticidal mercury compound.	DR K P DUBEY Department of Chemistry University of Kashmir Srinagar (J & K)	1-2-1980
22.	Flash photolysis study of photo-chemical reactions and energy transfer in solutions and in micelles.	PROF. K K ROHATGI MUKHERJEE Department of Chemistry Jadavpur University Calcutta-700032	14-9-1979
23.	Vulcanisation of rubber with mixed crosslinking systems.	DR S K DE Rubber Technology Laboratory Department of Chemistry Indian Institute of Technology Kharagpur-721302 (W.B.)	
24.	Effect of ligand fields on stereo-chemistry and spin-state in transition metal complexes of biologically active thio and selono carbazones.	DR Y R BHOON Lecture, Sri Venkateswara College, Dhaula Kuan New Delhi-110021	
25.	Ionophores and Metal Toxication in Biological Systems.	DR R C SRIVASTAVA Scientist Industrial Toxicology Research Centre Mahatma Gandhi Marg Post Box No. 80 Lucknow-326001	
26.	-do-	DR U C AGARWALA Head, Chemistry Dept. Indian Institute of Technology Kanpur-208016	

1	2	3	4
27.	Ionophores and Metal Toxication in Biological Systems.	DR S K KATIYAR Professor of Chemistry Indian Institute of Technology Kanpur-208016	
28.	-do-	DR H L NIGAM Chemistry Department University of Allahabad Allahabad	
29.	Biomemetic Chemistry of Microcyclic Coordination compounds models for hemo-proteins.	DR V KRISHNAN Associate Professor Dept. of Inorganic & Physical Chemistry Indian Institute of Science Bangalore-560012	23-12-1980
30.	Organophosphorus Compounds as Complexones.	DRS D M PURI/S N DUBEY Dept. of Chemistry Kurukshetra University Kurukshetra-132119	
31.	Study of metal-quinone model compounds mimicking biological redox reactions.	DRS S B PADHYE/ M P GUPTA/and S R CADRE Dept. of Chemistry University of Poona Pune–7	
BOTANY			
32.	Hormonal control of flowering & fruiting including forest trees.	PROF. H Y MOHAN RAM Department of Botany University of Delhi Delhi-110007.	1-4–1980
33.	Hormonal control of flowering & fruiting including forest trees.	DR K GURUMURTI Officer-in-charge Plant Physiology and Ecology Branch Forest Research Institute and College Dehra Dun-248006	1-6-1979
34.	Hormnal control of flowering & fruiting including forest trees.	DR S K SINHA/ DR S C BHARGAVA Water Technology Centre Indian Agricultural Research Institute New Delhi-110012	Feb. 1980

1	2	3	4
35.	*In vitro* culture of steroid yielding plants.	PROF. A K SHARMA Centre of Advanced Study in Botany Department of Botany University of Calcutta Calcutta-700019	May 81
36.	*In vitro* culture of steroid yielding plants.	DR C K ATAL Director Regional Research Laboratory Jammu—Tawi	
37.	*In vitro* culture of steroid yielding plants.	DR T N KHOSHOO Director National Botanical Research Institute Lucknow	
38.	The limnobiotic studies and the utility of the thermal waters of Bhim–Bundh, Monghyr, Bihar.	PROF. J S DATTA MUNSHI Head of the P G Department of Zoology, University of Bhagalpur Bhagalpur	1-8-1979
39.	Production of new genotypes of chrysanthemum cinereriaefolium and allied species through genetic manipulations and *in vitro* culture.	DR (MISS) AMITA PAL Vitro Culture Section Bose Institute 93/1, Acharya Prafulla Chandra Road Calcutta-700009	1-9-1980
40.	Physiological and genetical studies of blue-green algal viruses (cyanophages).	DR R N PADHY Lecturer-in-Botany Khallikote College Berhampur-760001 Orissa	
41.	Feeding and reproductive behaviour in relation to insect host plant interactions in some phytophagous lygaeids and mirids.	DR T N ANANTHAKRISHNAN Entomology Research Institute Loyola College Madras-600034	
42.	Investigation into the causes of fruitlessness in some Bignoniances.	DR S V S CHAUHAN Department of Botany R B S College Agra-282002	

1	2	3	4
43.	Biology of Madhuca Indica (Mahuda).	PROF. J J SHAH Professor of Botany Head of the Department Dept. of Biosciences Sardar Patel University Vallabh Vidyanagar-388120 (Gujarat)	
44.	(I) Seed coat structure of different species of the genus corchorus and hibiscus. (II) Architecture of the leaves of different species of the corchorus and hibiscus.	DR R D CUNDU C/o Botanical Survey of India 1, Sudder Street Calcutta-700016	
45.	On the physiology and biochemistry of seed germination of forest trees of north-eastern region.	DR PRAMOD TANDON Botany Department North-Eastern Hill University Shillong-793014	
ZOOLOGY			
46.	Studies on the behaviour, reproductive physiology and endocrine regulation of reproduction of the avian pests of West Bengal.	PROF. ASOK GHOSH, Department of Zoology 35, Ballygunge Circular Road Calcutta University Calcutta-700019	16-11-1979
	–do–	DR BISWARANJAN MAITI Lecturer in Zoology University of Calcutta 35, Ballygunge Circular Road Calcutta-700019	
	–do–	DR S P BHATTACHARYYA Department of Zoology Endocrinology Laboratory Kalyani University Kalyani	
	–do–	DR A K SARKAR Reader in Zoology Burdwan University Burdwan	

1	2	3	4
47.	Behavioural biology of hapalia Mechaelis and hyblas puera (Teak Pests)	DR V K K PRABHU Zoology Department University of Kerala Trivandrum (Kariavattom)	15-10-1980
48.	Molecular Biology of the DNA-loss in terminally differentiation lens fibre cells.	DR S P MODAK Department of Zoology University of Poona Pune-411007	1-8-1979
49.	Ciliate protozoa as models for the study of cellular aging : Cytological ultra-structural and biochemical studies.	DR C M S DASS Department of Zoology University of Delhi Delhi-110007	
50.	Heterochrotion and cell differentiation in drosophila.	DR S C LAKHOTIA Department of Zoology Banaras Hindu University Varanasi-5	1-4-1980
51.	Effects of a few commonly used pesticides on the crossingover rate and chiasma frequency.	DR S P SINHA Reader in Zoology P G Department of Zoology Bhagalpur University Bhagalpur-812007	
52.	Aphids (Homoptera) of Garhwal Himalaya and their parasities and predators.	DR S CHAKRABARTI Lecturer Department of Zoology Faculty of Science University of Kalyani Kalyani, West Bengal	23-12-1980
53.	Studies on the Bio-systematics of the Protozoan parasites in Insect pests of West Bengal and probale implication in their biological control	DR D P HALDAR Parasitology Laboratory Department of Zoology University of Kalyani Kalyani-741235 West Bengal	
	BIOCHEMISTRY		
54.	Electrical communications in the cellular slime molds.	DR V NANJUNDIAH Molecular Biology Unit, Tata Institute of Fundamental Research Homi Bhabha Road Bomby-400005	8-8-1978

1	2	3	4
55.	Studies on the role of pineal in tumour inhibition.	DR T N CHAPEKAR Asstt. Professor of Biochemistry, All India Institute of Medical Sciences New Delhi-110029	1-9-1980
56.	Synthetic, Spectroscopic and X-ray diffraction studies on proline containing peptides. The Role of amino acids in peptide folding.	DR P BALARAM Molecular Biophysics Unit Indian Institute of Science Bangalore-560012	
57.	Investigation on some fusarial mycotoxins and their remedy.	DR. D K CHAKRABARTI Research Associate Department of Pharmaceutics Institute of Technology Banaras Hindu University Varanasi-221005	
58.	Physico-chemical Studies on circular duplex DNA and reconstituted from V DNA	DR S K BRAHMACHARI Research Associate Molecular Biophysics Unit Indian Institute of Science Bangalore-560012	23-12-1980
	MEDICAL SCIENCES		
59.	Growth differentiation in molecular events in cell differentiation.	DR C R KRISHNA MURTI Director Industrial Toxicology Research Centre Post Box No. 80 Mahatma Gandhi Marg Lucknow-226001	
60.	Growth differentiation in molecul ar events in cell differentiation.	DR S S AGARWAL Department of Medicine King George Medical College Lucknow	Dec. 1979
61.	Growth differentiation in molecular events in cell differentiation.	DR M K SAHIB Division of Biochemistry Central Drug Research Institute Lucknow	Sept, 1979

1	2	3	4
62.	Role of cell surface in growth and differentiation	DR G P PHONDKE Medical Division Bhabha Atomic Research Centre Trombay, Bombay	1-1-1979
63.	Studies on the cell surface and cell kinetics in myeloid leucocytes during differentiation and leukomogenesis.	DR A N BHISAY Cancer Research Institute Tata Memorial Centre Parel, Bombay-12	1-3-1979
64.	Pathogenesis of Cancer Biophysical study of mechanism of DNA unwinding drug-DNA and metal DNA interactions.	DR (MRS) V KOTHEKAR Dept. of Biophysics All India Institute of Medical Sciences New Delhi-110029	1-9-1979
	INTER-INSTITUTIONAL AND MULTI-DISCIPLINARY PROJECT ON 'STUDY OF PAIN'		
65.	Neuro-Anatomy.	DR (MRS) V BIJLANI Department of Anatomy All India Institute of Medical Sciences New Delhi-110029	
66.	Neuro-Physiology.	DR (MRS) S. DUA SHARMA Principal Department of Physiology M S Ramaiah Medical College Gokula, Extension Bangalore-560054 DR K N SHARMA Professor & Head of Physiology, University College of Medical Sciences, New Delhi.	

1	2	3	4
67.	Psychopharmacology.	DR S K KULKARNI Reader Department of Pharmaceutical Sciences Panjab University Chandigarh-160014 DR K N SHARMA Professor & Head of Physiology University College of Medical Sciences New Delhi	
68.	Clinical & Biochemical.	DR P N TANDON Professor & Head of Neurosurgery All India Institute of Medical Sciences New Delhi. DR S S SAINI Assistant Professor of Neurosurgery All India Institute of Medical Sciences New Delhi-110029 DR (MISS) SHAIL K SHARMA Asst. Professor Dept. of Biochemistry All India Institute of Medical Sciences New Delhi-110029	
69.	Acupuncture/Electro-acupuncture.	DR A BHATTACHARYA Dept. of Anaesthesiology Safdarjang Hospital New Delhi-110029	
70.	A study of communication pattern in psychiatric patients with the aid of information theory.	DR H M CHAWLA Asstt. Prof. of Psychiatry All India Institute of Medical Sciences New Delhi-110029	

1	2	3	4
	AGRICULTURE		
71.	Genetics of Rhizobium for biological nitrogen Rhizobium.	PROF. S N KAKAR Dean, College of Basic Sciences & Humanities Haryana Agricultural University, Hissar	11-4-1980
72.	Genetics of biological nitrogen fixation by Rhizobium.	DR B S GHAI Department of Genetics Panjab Agricultural University Ludhiana	18-6-1980
73.	Genetics of blue-green algae nitrogen fixation.	DR P K SINGH Head, Division of Soil Science & Microbiology Central Rice Research Institute Cuttack-763005	20-1-1981
74.	Genetic studies on nitrogen fixation by blue-green algae: The organization of nif genes.	PROF. H D KUMAR Department of Botany Banaras Hindu University Varanasi-221005	2-4-1980
75.	Mutational manipulation of N_2 fixation in Nostoc Muscorum and Anabasena doliolum with Agricultural implications.	DR H N SINGH School of Life Sciences University of Hyderabad Hyderabad-500001	8-5-1980
76.	Genetics of Nitrogen Fixation in Azotobacter.	DR M LAKSHMANAN Prof. of Microbiology School of Biological Sciences Madurai Kamaraj University Madurai-21	9-9-1980
77.	Uncovering of regulatory mechanism controlling modulation and Nitrogen fixation.	PROF. V V MODI Head, Dept. of Microbiology Faculty of Science The Maharaja Sayajirao University of Baroda Baroda-390002	1-5-1980

1	2	3	4
78.	Residual Effect and Accumulation of highly persistent chemicals in plants and animal cells.	PROF. P C KESAVAN/ PROF. P MOHANTY School of Life Sciences Jawaharlal Nehru University New Mehrauli Road New Delhi-110067.	18-10-80
79.	Studies on plant pesticides.	DR AVIJIT BANERJI Lecturer, Dept. of Pure Chemistry University College of Science, 92, Acharya Prafulla Chandra Road, Calcutta-9.	1-9-1979
80.	Polyamines in the control of ageing of rice seeds.	DR (MRS) BHARATI GHOSH, Lecturer Botany Department Bose Institute, 93/1, Acharya Prafulla Chandra Road Calcutta-700009.	15-9-1979
81.	Genetic regulation of heterocyst differentiation and Nitrogen fixation in blue-green algae (Cyanobacterium)	DR V D AMLA Algae Laboratory, National Botanical Research Institute Lucknow-226001.	
	ENGINEERING		
82.	Wind induced near wake of tall assymmetrical structures.	DR A K GUPTA Department of Aeroneutical Engineering Indian Institute of Technology Kanpur.	2-1-1979
83.	Identification and characterisation of energy levels in CaAS and CaAIAS.	DR A K SAXENA Reader Dept. of Electronics & Communication Engineering University of Roorkee Roorkee-247672.	

1	2	3	4
	GEOLOGY		
84.	Archaean Geochemistry of the South Indian Shield.	PROF. C S PICHAMUTHU Dept. of Mines & Geology Government of Karnataka Bangalore-560001.	1-8-1980
85.	Mineralogy and Utilization Technology of Laterites and Bauxites of Western India.	DR K S BALASUBRAMANIAN Asstt. Professor Civil Engineering Dept. Indian Istitute of Technology Bombay.	19-9-1979
86.	Geology, tectonics and geochemistry of the ophidite belt and associated mineralization of Manipur State.	DR N C GHOSO Department of Geology Patna University Patna.	
87.	Basement cover relations in the pre-cambrian organic belts of Rajasthan	DR S K GHOSH Dept. of Geological Sciences Jadavpur University Calcutta.	
88.	-do-	DR A B ROY Dept. of Geology University of Rajasthan Udaipur.	
89.	-do-	DR K NAHA Department of Geology & Geophysics Indian Institute of Technology Kharagpur	
90.	Marine Archaeological Studies in the Indian Waters.	DR S R RAO Marine Archaeologist National Institute of Oceanography Dona Paul-403004 GOA	

1	2	3	4
91.	Lithological and Geo-chemical controls for copper mineralisation in Karnataka.	DR V N VASUDEV Asstt. Geologist & Research Fellow, Department of Mines and Geology Government of Karnataka Bangalore-560001.	

ANNEXURE VI

PROJECTS TO WHICH FINANCIAL SUPPORT WAS TERMINATED DURING 1981-82

Sl. No.	*Title of the Project*	*Name of Investigator (s) and Institution(s)*
1.	Nonlinear phenomena in plasma waves and instabilities.	PROF R S KUSHWAHA Dept. of Mathematics Jodhpur University
2.	Nonlinear interaction of electromagnetic waves with plasmas.	PROF M S SODHA Deputy Director IIT, New Delhi-110029
3.	Magneto-rotating plasma: application to astrophysical phenomena.	PROF J N TANDON Dept. of Physics & Astrophysics Univ. of Delhi
4.	Nonlinear wave propagation phenomenon in ferromagnetic systems.	DR M LAKSHMANAN Dept. of Physics Autonomous Post-Grad. Centre Univ. of Madras, Tiruchirapalli-620020
5.	Nonlinear plasma theory design and fabrication of diagnostic tools for plasmas	DR SOM KRISHAN Dept. of Physics IISC., Bangalore-560012
6.	Study of photovoltaic power conversion process in silicon solar cells.	DR C M SINGAL Dept. of Physics Univ. of Roorkee
7.	Studies in Back Surface field silicon Solar cells and allied devices.	DR S K CHATTOPADHYAYA Physics Dept., Univ. of Kurukshetra
8.	Performance of Heavily doped solar cells.	PROF M S SODHA Deputy. Director IIT, Hauz Khas, New Delhi
9.	Temporal response of solar cells.	DR V K TEWARI Dean, Research & consultancy Division, Birla Institute of Technology & Science Pilani

1	2	3
10.	Studies on Poly-crystalline Cds solar cells.	DR H SAHA Dept. of Physics Kalyani University
11.	Investigations of Interstellar Molecules.	PROF S N GHOSH Professor of Applied Physics Calcutta University
12.	Manipulation of behaviour of insect pests for their control	DR K N SAXENA Professor of Zoology Dept. of Zoology Delhi University
13.	Cytogenetical analysis and experimental hybridization in freshwater food fishes.	DR K K RISHI Dept. of Zoology Kurukshetra University
14.	Control of annual Rhythms	DR ASHA CHANDOLA Dept. of Zoology B.H.U., Varanasi
15.	A study of cellular proliferation and differentiation in dysplastic and neoplastic lesions of the human breast.	DR (MISS) KUSUM JOSHI Dept. of Pathology Medical College, Rohtak
16.	Genetic Regulation of Heterocyst formation, Nitrogen fixation and NH_4+Assimilation in the blue–green algae.	DR J K LADHA Lecturer, School of Biological Sciences, Madurai Kamaraj University, Palkalai Nagar Madurai-625021
17.	Study of sub-sonic wind effects on Civil Engineering structures.	DR PREM KRISHNA Dept. of Civil Engg. Roorkee University

ANNEXURE VII

INTERNATIONAL CONFERENCES, NATIONAL SEMINARS, SYMPOSIA, WORKSHOPS, SUMMER/WINTER, SCHOOLS SPONSORED/SUPPORTED BY INSA DURING 1981-82

1. International Conference on Soil Science at New Delhi
   (Dr. J S Kanwar)
2. International School of Synthesis of Crystal Growth at NPL, New Delhi.
   (Dr. Krishan Lal).
3. International Conference on Environmental Education at New Delhi.
   (Dr M S Swaminathan)
4. International Symposium on Cecidology with special reference to Zoocecidia and Pathological Morphogenesis
   (To be held in 1982-83)
   (Prof. T N Ananthakrishnan)
5. International Conference on Condensed Chromatin and the Human X-Chromosome at IISC., Bangalore.
   (Prof. H Sharat Chandra)
6. International Workshop on the Physics of Semiconductor Devices at SSPL, New Delhi.
   (Dr S C Jain)
7. Virology Conference at CPRI, Simla
   (Dr S B Lal)
8. Forth National Symposium on Radiation Physics at Panjabi University, Patiala
   (Prof. B S Sood)
9. International Symposium on Water Resources Conservation, Pollution and Abatement at Roorkee University.
   (Prof. R J Garde)
10. Workshop-cum-Course on Carcinogenicity, Mutagenicity and Teratogenicity at CRI, Bombay.
    (Dr. M G Deo)
11. International Symposium on Microwaves & Communication at IIT, Kharagpur.
    (Prof. B Chatterjee)

12. Regional Conference on Teaching of Quantum Mechanics including its Philosophical Implication (To be held in 1982-83)
Prof. L S Kothari & A N Mitra)

13. International Symposium-cum-Workshop on Non Isotopic Immunoassays and their applications at New Delhi (INSA)
(Prof. G P Talwar)

14. IGU Symposium on Food Systems of the Developing World with special referenee to India (To be held in 1982-83)
(Dr. Mohammad Shafi)

15. International Seminar on 'Living State' at AIIMS, New Deihi.
(Prof. R K Mishra)

16. Seminar on Astronomy and Astrophysics on the occasion of 7th Annual Session of Astronomic al Society of India at Roorkee University.
(Dr C Prasad)

17. International Symposium on Theoritical Physics (a) Field Theory (b) Statistical Physics and (c) Astrophysics at Delhi University.
(Prof. G P Srivastava)

18. Second National Symposium on Positron Annihilation at University of Madras.
(Prof V Devanathan)

19. National Space Science Symposium at TIFR, Bombay.
(Prof R R Daniel)

20. XIII National Conference on Crystallography at Nagpur University.
(Prof C Mande)

21. Seminar on Organometallic Compounds in Chemical Synthesis at Rajasthan University, Jaipur.
(Prof K C Joshi)

22. Workshop-cum-Seminar on Computational Fluid Dynamics at IISc. Bangalore.
(Prof R Narasimha)

23. Seminar on Building Materials—Their Science and Technology at New Delhi (INSA).
(Prof Dinesh Mohan)

24. Seminar on Exploration Geophysics at N I O, Goa.
(Shri H N Siddiquie/Prof V L S Bhimasankaram)

25. Applications of Catastrophe Theory in Earth Sciences at Roorkee University.
(Dr. B B S Singhal)

26. Workshop on Fluid Inclusions in Minerals—Its scope and Applications at IIT, Bombay.
(Prof. K C Sahu)

27. International Symposium on Plant Cell Culture in Crop Improvement at Bose Institute, Calcutta.
(Dr S K Sen).

28. Workshop on Animal Cell Culture and Differentiation at Poona University.
(Dr S P Modak).

29. Workshop on Evaluation of Mutagenic Potential of Environmental Agents—Microbial and Mammalian System at BARC, Bombay.
(Dr R K Bhattacharya).

30. Gene Structure, Expression and Recombination/Structure and function of Biomembranes, at the time of 50th Annual Meeting of Society of Biological Chemists (India) at Baroda University.
(Prof. V V Modi).

31. International Symposium on Early Diagnosis and Prevention of Disability and National Symposium on Tribal Health at B J Medical College, Poona.
(Dr (Mrs) M A Phadke).

32. Third International Symposium on Plant Pathology at IARI, New Delhi
(Dr V V Chenulu).

33, Symposium on Chemistry, Agriculture and "Man on the Occasion of 90th Birthday Celebration of Prof. N R Dhar at NAS, Allahabad.
(Prof. H C Khare).

34. Symposium-cum-Workshop on Current Neurosurgical Practices at AIIMS.
(Prof. A K Banerji)

35. 4th All India Congress of Cytology and Genetics at University of Kalyani.
(Prof. G K Manna).

36. All India Symposium on Biology of Reproduction in Plants at Delhi University.
(Prof. R N Kapil).

37. Workshop on Gravitation and Relativistic Astrophysics, at PRL, Ahmedabad.
(Dr A Prasanna).

38. All India Plasma Seience Symposium, at IIT, Delhi.
(Prof. M S Sodha).

ANNEXURE-VIII

PUBLICATION GRANTS TO REGISTERED SOCIETIES ASSOCIATIONS, INSTITUTIONS, ETC. IN THE YEAR (1981-82)

1. Bombay Natural History Society, Bombay.
2. Institution of Chemists (India) Calcutta.
3. Calcutta Mathematical Society, Calcutta.
4. Indian Science News Association, Calcutta.
5. The National Academy of Sciences, Allahabad.
6. Indian Society of Earth Sciences, Calcutta.
7. Indian Chemical Society, Calcutta.
8. The Asiatic Society, Calcutta.
9. The Current Science Association, Bangalore.
10. Indian Society of Genetics & Plant Breeding, IARI, New Delhi.
11. Entomological Society of India, New Delhi.
12. Astronomical Society of India, Hyderabad
13. Acoustical Society of India, New Delhi.
14. Indian Science Congress Association, Calcutta.
15. International Society of Plant Morphologists, New Delhl.

ANNEXURE-IX

Project No. 3 'Studies of Lunar Soil and other extra terrestrial materials'

The name of Tata Institute of Fundamental Research, Bombay has been deleted as a participating institute from Indian side at the request of TIFR, Bombay.

Project No. 4 'Earthquake Prediction'

The name of Tata Institute of Fundamental Research, Bombay has been deleted as a participating institute from Indian side at the request of TIFR, Bombay.

Project No. 14 (e) 'Molecular Genetics and Gene action'

Banaras Hindu University, Varanasi has been included as an additional participating institute from Indian side under the above project on the request from BHU, Varanasi.

New Inclusion

Project No. 22 'Experimental Minerology'

Participating Institutions :

Indian side :
1. Indian Institute of Technology, Kharagpur
2. Indian Institute of Science, Bangalore
3. Bhabha Atomic Research Centre, Bombay
4. National Geophysical Research Institute, Hyderabad.

Soviet side :
1. Institute of Experimental Minerology
2. Institute of Geology and Geophysics, Novosibrisk
3. Institute of Geochemistry and Analytical Chemistry
4. Institute of Geology of Mines and Ore genesis, Petrography, minerology and Geochemistry.

ANNEXURE-X

DELEGATION TO ICSU CONFERENCES

Sl. No.	*Name & Address of the delegate*	*Name of the Conference place and date*	*Financial support granted by the Academy*
1	2	3	4
1.	DR A C GARG Assistant Professor Aero Engg. Department IIT Bombay	5th International Conference on Fracture at Cannes, France from 26 March to 3 April	25% airfare +registration +incidentals if necessary.
2.	DR B S RAMAKRISHNA Vice Chancellor Hyderabad Univ. Hyderabad.	Intl. Cong. of Acoustics at Achen, (West Germany) from 28-30, April, 1981	50% actual travel to the place of Conf. and back through shortest route plus full per diem.
3.	DR K N MUTREJA Executive Engineer Irrigation Design Orgn. Roorkee	Intl. Symposium on Rainfall Runoff Mcdelling at Mississippi, USA from 17-21 May, 1981.	50% airfare by shortest route + full per diem + registration + incidentals if necessary
4.	DR P C BANERJEE Asstt. Professor Material Science Centre IIT, Kharagpur	27th IUPAC Symp. on Macromolecules at Strasbourg, France from 6-9 July, 1981	per diem for 14 days
5.	DR J GANGULY Biochemistry Department IISc., Bangalore.	6th International Symposium on Caratenoids at Liverpool, UK from 26-31 July, 1981	50% airfare by shortest route + full per diem + registration + incidentals if necessary

1	2	3	4
6.	DR V V MODI M.S. University Baroda.	-do-	Without financial assistance
7.	DR S A STEPHENS Reader TIFR Bombay	17th International Cosmic Ray Conference at Paris France from 13-25, July 1981	50% airfare by shortest route
8.	DR D P BHATTACHARYYA Indian Association for Cultivation of Science Jadavpur, Calcutta	-do-	Rs. 1665/- only
9.	DR B N DHAWAN Central Drug Research Institute Lucknow	8th International Conf. of Pharmacology at Tokyo Japan from 19-24, July 1981	Leader 50% airfare by shortest route + per diem (Full) + registration + incidentals if necessary
10.	DR K K AGRAWAL Professor of Pharmacology Maulana Azad Medical College, New Delhi	-do-	50% airfare by shortest route+full per diem+registration+incidentals if necessary
11.	DR P SEN Senior Professor of Pharmacology University College of Medical Sciences New Delhi	-do-	-do-
12.	DR (MRS) V N DADKAR Associate Professor LTM Medical College Bombay	-do-	Airfare less Rs. 5000/- + full per diem + registration + incidental if necessary

1	2	3	4
13.	DR K P BHARGAVA K G Medical College Lucknow	-do-	Without financial assistance
14.	DR D D PANT Emeritus Professor Kumaon University Nainital	International Conference of Luminescence at Berlin from 20-24, July, 1981	50% airfare + full per diem + incidentals + registration.
15.	DR J G NEGI NGRI Hyderabad	21st Assembly of IASPEI at London, Ontario, Canada from 21-30 July 1981	50% airfare + full per diem + registration
16.	DR A S GHOSH Lecturer in Theoretical Physics Indian Association for Cultivation of Science Jadavpur, Calcutta	International Conference on Positron Scattering and Annibilation in Gases at Totonto, Canada from 9-10 July, 1981	Rs. 4000/-
17.	DR V K KAPAHI TIFR I.I.Sc. Campus Bangalore	Symposium No. 97 Extraglactic Radio Sources at Albuquarque USA from 3-7 August, 1981	50% airfare by soortest route + full per diem + registration incidentals if necessary
18.	DR K K SCARIA Indian Institute of Astrophysics Bangalore	General Meeting for Asian Pacific Region at Bandung Indonesia from 31 August to 4 September 1981	-do-
19.	PROF B M JOHRI Prof. of Botany Delhi University Delhi	13 International Botanical Congress at Sydney, Australia from 21-25 August 1981	Leader 50% airfare by shortest route + full per diem + registration + incidentals if necessary

1	2	3	4
20.	PROF C V SUBRAMANIAN Centre for Advanced study in Botany Madras University Madras	-do-	50% airfare by shortest route+full per diem + registration +incidentals if necessary
21.	PROF D D PANT Head, Department of Botany Allahabad University, Allahabad	-do-	-do-
22.	DR A K CHATTERJI Assistant Professor (Agriculture Engineering Department) I.I.T. Kharagpur	-do-	-do-
23.	PROF R N KAPIL Botany Department Delhi University Delhi	-do-	50% air fare only
24.	PROF P S RAMAKRISHNAN Botany Department School of Life Sciences N E Hill University Shillong	13 International Botanical Congress at Sydney Australia from 21-25 August 1981	Without financial assistance
25.	DR K L MEHRA Director National Bureau of Plant Genetics Research I.A.R.I., Campus, Delhi	-do-	Without financial assistance
26.	DR S K SAWHNOY Reader Guru Nanak Dev University Amritsar	-do-	Without financial assistance
27.	DR C K VARSHNEY Jawaharlal Nehru University New Delhi	-do-	Rs. 4000/-

1	2	3	4
28.	PROF C N R RAO IISc, Bangalore	6th International Conference on Chemical Education at Maryland USA from 9-14, August 1981	Without financial assistance
29.	DR K V SANE Reader in Chemistry Delhi University Delhi	-do-	50% fare + 8 days per diem + registration
30.	DR V S EASWARAN Chemistry Department Delhi University Delhi-110007	-do-	Rs. 3000/- plus per diem + registration
31.	DR K N TRIVEDI Professor of Chemistry M S University Baroda	8th International Conference Heterocyclic Chemistry at Grak Austria from 25-28 August 1981	50% airfare by the shortest route + full per diem + registration + incidentals if necessary
32.	DR R P NARAIN Chemistry Department Gorakhpur University Gorakhpur	-do-	Rs. 2000/-
33.	DR B S JOSHI Sub-Manager CIBA Geigy Research Centre Bombay	-do-	Without financial assistance
34.	DR N S NARASIMHAN Professor of Chemistry Poona University Poona	-do-	54% airfare by the shortest route + full per diem + registration + incidentals if necessary
35.	PROF C N R RAO IISc., Bangalore	31st IUPAC General Assembly at Rauven, Belgium from 25 August to 2 September 1981	Leader Without financial assistance

1	2	3	4
36.	PROF S RAMA-SESHAN Joint Director I ISc., Bangalore	12th International Congress & General Assembly of IUCr at Ottawa, Canada from 15-25 August 1981	per diem and registration
37.	PROF N N SAHA Saha Institute of Nuclear Physics, Calcutta	-do-	-do-
38	DR M P GUPTA Professor & Head Physics Department Ranchi University Ranchi	-do-	-do-
39.	DR KRISHAN LAL Asstt. Director NPL, New Delhi	12th International Congress and General Assembly of IUCr. at Ottawa, Canada from 15-25, August, 1981	per diem and registration
40.	DR R CHIDAM-BARAM BARC, Bombay	-do-	Without financial assistance.
41.	DR S PARTHASA-RATHY Reader Madras University	-do-	50% airfare by the shortest route +full per diem +registration +incidentals if necessary
42.	DR S P SENGUPTA DHAN Reader Indian Asssociation for Cultivation of Science Calcutta	-do-	-do-
43.	DR M RAMANA-DHAN BARC, Bombay	-do-	-do-
44.	DR G SINGH Banaras Hindu University	-do-	Rs. 3300/-

1	2	3	4
45,	DR P KRISHNA Banaras Hindu University Varanasi	-do-	Nil
46.	DR G B MITRA Indian Institute of Technology Kharagpur	-do-	Nil
47.	DR R RAGHAVA RAO Professor, PRL, Ahmedabad	IAGA Assembly at Edinburgh, UK, from 5-15 August 1981	50% airfare by shortest route +full per diem +registration +incidentals if necessary
48.	DR Y S SOMAYAJULU NPL, New Delhi	-do-	-do-
49.	DR R S RASTOGI Director I I G, Bombay	-do-	Nil.
50.	DR B P SINGH Indian Institute of Geomagnetism Bombay	-do-	Nil.
51.	DR (MRS) G RAJA RAM Indian Institute of Geomagnetism Bombay	-do-	Nil.
52.	DR A P Mitra NPL New Delhi	III Scientific Assembly of IAMP,	Partial fare + per diem.
53.	DR B H SUBBARAYA Associate Professor PRL Ahmedabad	Hamburg, 17-29 August 1981	50% airfare by the shortest route + full per diem + registration + incidentals if necessary

1	2	3	4
54.	DR V V ATHANI Prof. of Elect. Engg. IIT Bombay.	8th Triennial World Congress of International Federation of Automatic Control at Kyoto, Japan from 24-25, August 1981	25% airfare by the shortest route + full per diem + registration + incidentals if necessary
55.	DR E C SUBBARAO Prof. of Metallurgy IIT Kanpur.	5th International Meeting on Ferro-electricity at Pennsylvania, USA from 17-22 August, 1981	50% airfare by the shortest route
56.	DR (MRS) A BHANUMATI Reader in Physics Department of Physics Andhra University Waltair.	-do-	Rs. 2000/-
57.	DR B K CHAUDHURI Lecturer in Physics Megnetism Department Indian Association for the Cultivation of Science Jadavpur, Calcutta.	-do-	50% airfare + Full per diem + registration + incidentals if necessary
58.	PROF. A R GOPAL AYENGAR c/o Shri P K Dayanidhi 15-D Gulmarg Anushaktinagar Bombay.	7th International Bio-Physics Congress and 3rd American Biochemistry Congress at Mexico from 23-28 August 1981	Nil.
59.	DR D P BURMA Professor & Head, Department of Biochemistry BHU, Varanasi.	-do-	50% airfare by the shortest route + full per diem + registration + incidentals if necessary

1	2	3	4
60.	DR D BALASUB-RAMANIAN Regional Research Laboratory, Hyderabad.	-do-	-do-
61.	DR ASHOK PATTI Indian Institute of Astrophysics Bangalore.	2nd Asian Pacific Regional Astronomy meeting at Bandung (Indonesia) from August 31 to 3rd September 1981	Nil.
62.	DR Y R CHADHA P I D, New Delhi.	International Seminar of Editors of Chemistry Journals at Vancouver, Canada from 19-20 August, 1981	Rs. 2500/-
63.	DR INDU PRAKASH Reader and Head Department of Chemistry P P N College Kanpur.	28th IUPAC Congress at Vancouver, British Columbia Canada from 16-22 August, 1981	Rs. 2000/-
64.	PROF V K GARG Department of Mechanical Engineering Indian Institute of Technology Kanpur.	2nd IUTAM Symposium on Stability in the Mechanics of Continua at Numbrecht, FRG from 31st August to 4th September 1981	Rs. 4000/-
65.	DR A P MITRA Vice President URSI, N P L, New Delhi.	URSI General Assembly and other Open Symposia at Washihgton, DC USA from 10-18, August, 1981	Leader Without financial assistance
66.	DR V RADHA-KRISHNA Director R R I, Bangalore.	-do-	Without financial assistance
67.	PROF P D BHAVSAR Space Application Centre Jodhpur Tekra, Ahmedabad.	-do-	-do-

1	2	3	4
68.	DR A K SAHA Scientist, N P L, New Delhi	-do-	50% airfare by the shortest route + full per diem + registration + incidentals if necessary
69.	DR R V BHONSLE P R L, Ahmedabad	-do-	-do-
70.	DR N V G SARMA Raman Research Institute, Bangalore	XXth General Assembly of URSI and other Open Symposia at Washington, Dc USA, from 10-18 August 1981	50% fare plus per diem and registration
71.	DR K M KOTADIA Prof of Physics, University School of Science, Gujarat University, Ahmedabad	-do-	Registration fee only
72.	DR R RAGHAVA RAO Physical Research Laboratory, Navrangpura, Ahmedabad	-do-	Nil.
73.	DR RAJESH PANDE Physical Research Laboratory, Navrangpura, Ahmedabad.	-do-	25% fare plus registration
74.	DR B S GOHIL, Physical Research Laboratory, Navrangpura, Ahmedabad	-do-	-do-
75.	DR A SEN GUPTA National Physical Laboratory, New Delhi	-do-	-do-
76.	DR P K PASRICHA National Physical Laboratory, New Delhi	-do-	Registration fee only

1	2	3	4
77.	DR B V SUBBARAYAPPA Director, DOIP, Nehru Centre Bombay	16th International Congress of History of Science at Bucharest, Romania from 26 August to 3 Sept. 1981	50% airfare by shortest route + full per diem + registration + incidentals if necessary
78.	DR S M R ANSARI Reader, Physics Department, Aligarh Muslim University Aligarh	-do-	-do-
79.	PROF A RAHMAN Chief Planning, and Head, CSSTD, Council of Scientific and Industrial Research, New Delhi	-do-	Per diem and registration only
81.	SRI S R RAO Marine Archaeology NIO, Panaji, Goa	16th International Conf of the History of Science at Bucharest, Romania from 26 August to 3 September 1981	Entire expenses by INSA
82.	DR A K BAG Project Coordinator Indian National Science Academy, New Delhi	-do-	-do-
83.	DR H C BHARDWAJ Banaras Hindu University Varanasi	-do-	Nil
84.	PROF K D ABHYANKAR Osmania University Hyderabad	5th International Coll on Binary and Multiple Start and Tracers of stellar and Evolution from 31 August to 3 September 1981	50% airfare by shortest route + full per diem + registration + incidentals if necessary.

1	2	3	4
85.	DR S K ALURKAR Associate Professor Physical Research Laboratory Ahmedabad	Colloqium No. 66 at Cremea USSR from 1–5 September 1981	-do-
86.	PROF N A NARASIMHAM Head, Spectroscopy Division BARC, Bombay	IUPAP General Assembly at Paris, France from 1–3 September 1981	Leader. Full air fare + full per diem + incidentals and registration
87.	DR B V SREEKANTAN Director, TIFR, Bombay	-do-	Full air fare + full per diem + incidentals and registration
88.	PROF M G K MENON President, INSA	-do-	No expenses
89.	DR V G BHIDE Deputy Director NPL, New Delhi	-do-	-do-
90.	PROF B R RAO Vice-Chairman University Grants Commission New Delhi	IUPAP General Assembly Paris, France 1–3 September 1981	50% air fare + per diem
91.	DR K L CHOPRA Sr. Professor Department of Physics Indian Institute of Technology Hauz Khaz New Delhi	International Thin Film Congress at Israel from 21–25 September 1981	Rs. 5000/-

1	2	3	4
92.	DR V K GAUR Prof. of Geophysics Department of Earth Science, Roorkee Univ. Roorkee	IAVCEI Symp. on Arc Volcanism at Tokyo, Japan from 30 August to 6 September 1981	Per diem for 8 days and registration fee
93.	PROF G P TALWAR All India Institute of Medical Sciences New Delhi.	IUIS Council Meeting at Lucerne, Switzerland on 27.9.1981	Difference of air fare plus per diem for 6 days
94.	DR R C MEHROTRA Department of Chemistry Rajasthan University Jaipur	31 General Assembly of IUPAC at Leuven, Belgium from 25Aug. to 3 Sept. 1981	Per diem for 4 days only
95.	DR M K VAINU BAPPU Director, Indian Institute of Astrophysics, Bangalore	Meeting of General Committee of ICSU at, Dubrovinsk Yugoslavia, from 24-25 Sept. 1981	Nil.

ANNEXURE XI

FINANCIAL RESISTANCE FOR PARTICIPATION IN NON—ICSU CONFERENCES

Sl. No.	*Name & address of the delegate*	*Name of the Conference, place and date*	*Financial support granted by INSA*
1		3	4
1.	PROF R K SINGH Haryana Agril Univ Hissar	SABARO Conference at Salangor Malaysia from 4–8 May 1981	Rs. 4000/-
2.	DR M GADGIL Indian institute of Science, Bangalore	17 Ethological Conference at Oxford, UK from 1-9 Sept 1981	-do-
3.	DR S K SRIVASTAVA Reader In Chemistry Roorkee University Roorkee	36 Industrial Waste Disposal Conference at Purdue, Indiana USA from 12-24 May 1981	-do-
4.	DR P K BHATTA-CHARYA Chemistry Department MS Univ. of Baroda Baroda	International Conference on Biological Aspects of Metals and matter related disease at Toronto, Canada from 19-22 October 1981	Rs. 4000/-
5.	DR S S THIGALE Lecturer Poona University Pune	Groundwater 81 an International Symp. on Exhibition on Groundwater for Developing Nations at Kuala Lumpur Malaysia from 6-13 June 1981	Rs. 3700/-

1	2	3	4
6.	DR B C MUKHERJEE Jadavpur University Calcutta	34 Session of International Committee for Coal Petrology at Pau, France, from 5-11 April 1981	Rs. 4000/-
7.	DR J C MISRA Assistant Professor Indian Institute of Technology Kharagpur	4 International Congress of Biorheology at Tokyo, Japan from 27 July to 1st August 1981	Rs. 4000/-
8.	PROF S N DESHPANDE Assistant Professor College of Engineering Amravati	3rd Industrial Conference on Polymers in Concrete at Korlyama, Japan from 13-15 May 1981	-do-
9.	PROF R J HANS GILL Centre for Advanced Study in Mathematics Punjab University Chandigarh	International Meeting on Discrete Geometry at Oberwolfach at West Germany from 12-18 July 1981	-do-
10.	DR K S MURTHY Osmania Uuiversity Hyderabad	8th International Thermal Symposium at Maryland, USA from 15-19 June 1981	-do-
11.	PROF KRISHNAJI Prof of Physics Allahabad University Allahabad	7th Colloquium on High Resolution Molecular Spectroscopy at Reading, UK from 14-18 September 1981	Rs. 1000/-
12.	DR N YATHINDRA Reader, Madras Univ. Madras	NATO/FEBS Advanced Institute at Maratsa, S. Italy from 3-16 May 1981	Rs. 4000/-

1	2	3	4
13.	DR S S DAGAONKAR Associate Professor Physical Research Laboratory Ahmedabad	SMY Workshop at Annescy from 26-31 October 1981	-do-
14.	DR KG GURUMURTHY Reader, Anthropology Karnataka University Dharwar	Symposium on Rural Development in South Asia at Amsterdam, Netherlands from 21-24 April 1981	-do-
15.	PROF P N TANDON Prof and Head Department of Neurosurgery All India Institute of Medical Sciences New Delhi 110016	7th Intl Conf of Neurological Surgery at Munich from 12-18 July 1981	Partial airfare and per diem
16.	DR HARISH BAHADUR Sr. Research Fellow National Physical Lab. New Delhi 110012	International Conference on Scanning Electron Microscopy at Dallas, Texas from 14-18 April 1981	Rs. 4000/-
17.	DR S N MUKHOPADHYAY Assistant Professor Biochemical Engg. Centre Indian Institute of Technology, Hauz Khas New Delhi 110016	2nd European Cong on Biotechnology at Sussex, UK from 6-10 April 1981	Registration fee only
18.	DR USHA K LUTHRA Cytology Research Centre Maulana Azad Medical College Bahadur Shah Zafar Marg New Delhi 110002	5th Asia Pacific Cancer Conference at Colombo Sri Lanka from 1-5 September 1981	Rs. 4000/-

1	2	3	4
19.	SHRI B L LOKESHWAR Tata Iustitute of Fundamental Research Homi Bhabha Road Bombay 400005	Intl Cong of Intl Society of Developmental Biology at Basel Switzerland	A sum equivalent to SF 150
20.	DR G P SRIVASTAVA Department of Physics Delhi University Delhi 110007	Intl IEEE/APS Symp. at Loss Angeles, USA from 15-19 June 1981	per diem oniy
21.	DR M L MUKHERJEE Asstt Professor Physics Department Indian Institute of Technology Kharagpur 721302	International Conference on Defects in Insulating Crystals at Riga (USSR) from 18-23 May 1981	Rs. 4000/-
22.	DR S P RAYCHAU- DHURI Chairman, Citrus Dieback Committee Intl. Society of Plant Pathology (ISPP) C-52 Inderpuri New Delhi 110012	International Conference on Plant Virus Disease Epidemilogy at Oxford, UK from 27-31 July 1981	-do-
23.	DR V N BINDAL Head, Ultrasonic Section National Physical Lab. New Delhi 110012	Conf and Exhibition (Ultrasonic Intl 81) at Brighton, UK from 30th June-2nd July 1981	Rs. 4000/-
24.	PROF H L NIGAM Chemistry Department Allahabad Uuiversity Allahabad 211002	Mendelsor Cong on General and Applied Chemistry at Baku, USSR from 21-26 September 1981	fare only

1	2	3	4
25.	DR SUNEEL R QAMRA Department of E Pediatrics PG Institute of Medical Education and Research Chandigarh 160012	Centennial Intl Anthropological Cong at Budapest from 1-7 June 1981	Rs. 4000/-
26.	DR J P GUPTA Indian Institute of Technology, Department of Chemical Engineering, Kanpur 208016	Intl Symp on Free Boundary Problems Theory and Applications at Monticatini, Italy from 18-26 June 1981	-od-
27.	DR SAMIR BHATTA-CHARYA Zoology Department Visva Bharati Univ. Santiniketan 731234	IX Intl Symp on Comparative Endocronology at Hongkong, from 7-11 December 1981	-do-
28.	DR B C CHAPARWAL Reader in Pediatrics MGM Medical College Indore (MP)	3rd Intl Symp on Magnesium at Badan-Badan, West Germany from 22-28 August 1981	-do-
29.	DR M K PARIDA PG Dept of Physics Sambalpur University Jyoti Bihar Burla 768017	Three months course at Intl Centre for Theoretical Physics, Trieste, Italy from 15.6.81 to 27.9.81	-do-
30.	PROF R P SINGH Physics Department Indian Institute of Technology, Powai Bombay 400076	2nd Intl Symp on Selected Topics in Statistical Mechanics at Dubna, USSR from 25-29 August 1981	-do-
31.	DR (MISS) S P ARYA Lecturer in Mathematics Maitreyi College Netaji Nagar New Delhi 110023	5th Prague Symp on General Topology and its Relations to Modern Analysis and (Algebra at Praha), Czechoslovakia from 24-28 August 1981	-do-

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32.	DR R K MANCHANDA Tata Institute of Fundamental Research Homi Bhabha Road Bombay 400005	Transmediternnian Balloon Experiment at Rome during July-August 1981	Rs. 4000/-
33.	DR BRAHM PRAKASH Prof and Head Department of Neurosurgery, G B Pant Hospital, New Delhi 110002	Microneurosurgical Symposium at Frankfurt 8-11 July 1981 Congress of Neurological Surgeons at Munich 12-18 July 1981	-do-
34.	DR S S BHUTADA Chairman, and Head Institute of Research in ORL Ayodhya Charitable Trust, 577 Shukrawar Subhash Nagar Pune 411002	XX International Congress of Permanent Commission and International Association of Occupational Health at Cairo in September 1981	-do-
35.	DR H G RAJ Junior Research Officer Biochemistry Department, V P Chest Institute Delhi University Delhi 110007	5th Asia Pacific Cancer Conference at Colombo, Srilanka from 1-4 September 1981	-do-
36.	PROF V S R RAO Indian Institute of Science, Molecular Biophysics Unit Bangalore 560012	Joint Meeting of Society of Biological Chemists and Biochemical Society at Lancaster (UK) from 16-18 September 1981	-do-
37.	DR S C SRIVASTAVA Zoology Department Lucknow University Lucknow	2nd International Conference on Chitin Chitsan at Sapparo, Japan from 12-14 July 1982	-do-
38.	PROF T RAMAKRISHNAN Prof and Chairman Microbiology and Cell Biology Laboratory, Indian Institute of Science, Bangalore	WHO-SFM Meeting on Mycobacterium Laprae and other Mycobacteria at Paris from 4-5 September 1981	-do-

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39.	DR T SUBRAMANIAM Lecturer in Zoology Zoology Department Madras University Madras 600005	A Meeting of ISIR at Newcastle upon Tyne (UK) from 7-10 September 1981	-do-
40.	DR Y R AHUJA Reader, Department of Genetics, Osmania University Hyderabad 500007	VI International Congress of Human Genetics at Tel Aviv on 13-18 September 1981	Rs. 4000/-
41.	DR R VISWANATHAN VP Chest Institute, Delhi University, Delhi 110007	7th Asia Pacific Congress on Diseases of the Chest at Hong Kong from 1-5 November 1981	-do-
42.	DR P N WAHI 41 Uday Park New Delhi 110049	International Cancer Conference at Nagoy Japan from 25-29 August 1981 and 5th Asia Pacific Cancer Conf at Colombo, Srilanka from 1-4 September 1981	-do-
43.	PROF C M S DASS Zoology Department Delhi University Delhi 110007	Meeting on Ciliate Molecular Biology at Boulder, Colorado from 17-20 August 1981	-do-
44.	DR M P RANGA RAO Prof and Head Mathematics Department Indian Institute of Technology, Powai Bombay-400005	8th International Coll on Gasdynamics of Explosions and Reactive Systems at Minsk, USSR from 24-28 August 1981	-do-
45.	DR S S SALUJA Director, Institute of Technology, Banaras Hindu University Varanasi 221005	3rd Miami International Conference on Energy Alternative Sources at Miami, Florida in Decemher 1980	Rs. 2000/

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46.	DR S N EKHOTE Scientist 'B', Low Temperature Division National Physical Laboratory, Hillside Road New Delhi 110012	International Conference on Low Temperature Physics (LT-16) at Los Angeles (USA) from 19-26 August 1981	Rs. 4000/-
47.	DR A J QAISAR Reader in Economic History, Centre of Advanced Study, History Department, Aligarh Muslim University Aligarh 202001	International Congress on the History of Turkish-Islamic Science and Technology at Istanbul Turkey during 14-18 September 1981	Rs 1400/-
48.	DR S LELE Reader in Physical Sciences, Department of Metallurgical Engineering Institute of Technology Banaras, Hindu University, Varanasi 221005	International Conference on Solid—Solid Phase Transformation at Pittsburgh from 10-14 August 1981	Rs. 4000/-
49.	DR J NANDA Prof of Electrical Engineering, Indian Institute of Technology Hauz Khas New Delhi 110016	International Conference on Modelling and Simulation at Leyon, France from 7-11 September 1981	Rs. 850/-
50.	DR D K SEN Associate Professor V/4 Maulana Azad Medical College Campus Kotla Road New Delhi 110002	4th International Symposium on Orbital Disorders at Amsterdam from 31 August to 2 September 1981	Rs 4000/.
51.	DR C SURYANARAYANA Reader in Physical Metallurgy Department of Metallurgical Engineering Banaras Hindu University Varanasi 221005	4 International Conference on Rapidly Quenched Metals at Sendai, Japan from 24-28 August 1981	-do-

1	2	3	4
52.	DR K KRISHAN Department of Atomic Energy, Reactor Centre Kalpakkam 603102 (TN)	Conference on Defects in Metals at Japan in November 1981	-do-
53.	PROF S C PANIGRAHI Assistant Professor Metallurgical Engineering Department, Indian Institute of Technology Kharagpur 721302	48 International Foundry Congress at Varna Bulgaria in October 1981	Rs 3000/-
54.	DR R P AGARWALA Head, Material Science Section, Bhabha Atomic Research Centre Chemistry Division Bombay 400085	International Conference on Point Defects and Defects Interaction in Metals to be held at Kyoto, Japan from 16-20 November 1981	Rs 4000/-
55.	PROF ASOK GHOSH Univ of Calcutta Histrophysiology Lab Deptt. of Zoology 35 Ballygunge Circular Road, Calcutta 700019	9 Intl Symp on Comparative Endocrinology at Hong Kong from 7-11 December 1981	Rs. 4000/-
56.	DR S M MATHUR Emeritus Scientist Centre of Advanced Study in Geology Saugar University Sagar 470003	Intl Geological Correlation Programme Projects 157 and 160 Meeting at Mexico from 11-14 January 1982	-do-
57.	DR V M D KULKARNI Prof and Head Geology Department KH Somaiya College of Science Vidyavihar Bombay 400077	16 Intl Symp on Remote Sensing of Environment at Cairo, Egypt in January 1982	-do-

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58.	DR S P SRIVASTAVA Prof and Head Chemistry Department Roorkee University Roorkee 247672	Intl Symp on Environmental Pollution and Chromatography Conf at Miami Beach, Florida, USA from 16-18 November 1981	-do-
59.	DR N C NAYAK Prof and Head Pathology Department All India Institute of Medical Sciences, New Delhi 110016	Joint Meeting of the Intl Association for Study of liver (IASL) and Asian Pacific Association for study of liver (APSL)	Rs. 2600/-
60.	DR D S SIDHU Asstt. Cytogeneticist Genetics Department Punjab Agri. Univ. Ludhiana 141004	Intl Symp on New Genetical Approaches to Crop Improvement at Karachi, Pakistan from 6-10 February 1982	Rs. 1500/-
61.	DR S C GOEL Reader in Zoology Poona University Poona 411007	Symposium on Embryology and Evolution on 30 March to 1 April 1982 at Brighton UK	Rs. 4000/-
62.	DR N AGARWAL Asstt Professor Obstetrics and Gynaecology All India Institute of Medical Sciences New Delhi 110029	VIII Asian and Oceanic Congress of Obstetrics and Gynaecology at Melbourne, Australia from 25-31 October 1981	-do-
63.	DR G S HURA Department of Electronics and Communication Engg. Roorkee University Roorkee 247672	15th Asilomar Conf at Pacific Grove California from 9-11 November 1981	Rs. 4000/-

1	2	3	4
64.	DR S K BRAHMA CHARI Molecular Biophysics Unit, IISc. Bangalore 560012	A Symposium on Future of Nucleic Acid Research at Kyoto Japan from 30 November to 4 December 1981	-do-
65.	DR (MRS) C M CHATURVEDI Lecturer, Zoology Dept Banaras Hindu University Varanasi 221005	9th Intl Conf on Comparative Endocrinology at Hong Kong from 7-11 December 1981	Rs. 2000/-
66.	DR (MRS) SITA NAIK Lecturer, Department of Immunopathology PG Inst of Medical Education and Research Chandigarh 160012	2nd Asia Oceania Histocompatibility Workshop Conf at Melbourne, Australia from 13-17 December 1981	Rs. 4000/-
67.	DR R M PITCHAPPAN Reader in Immunology School of Biological Sciences Madur ai Kamaraj Univ. Madurai 625021	Intl Conf on HLA Hospital Saint Louis, Paris France, from 7-18 December 1981	-do-
68.	DR KRISHNA KUMAR Assistant Professor Aeronautical Engg Dept. Indian Institute of Technology Kanpur 208016	Symp on Engg Sciences and Machanics at Taiwan from 28th December 1981 to 1 January 1982	-do-
69.	DR N N PANDITA Reader and Head, Department of AH 81 and Dairying Banaras Hindu Univ. Varanasi 221005	3rd Intl Conf on Goat Production and Diseases at Tucson Arizone, USA from 10-15 January 1982	-do-

1	2	3	4
70.	PROF S V SUBRAHMANYAM Head, Department of Physics Sri Venkateswara Univ. Autonomous PG Centre Anantapur Sri Venkateswara Puram (PO) Anantapur 515003	Asian Regional Meeting on Methods of Teaching Physics at Khon Kaen, Thailand from 11-13 November 1981	Rs. 2500/-
71.	PROF R C CHATURVEDI Mechanical Engineering Department Indian Institute of Technology IIT PO, Powai Bombay 400076	3rd Intl Colloq on Metal Working Lubrication at Esslingen, West Germany from 12-14 January 1982	Rs. 4000/-
72.	DR K D BAVEJA Sr Information Officer Thermometry Section National Physical Lab. Hillside Road New Delhi 110012	6th Intl Symp and Exhibit at Hilton Hotel, Washington from 15-18 March 1982	-do-
73.	DR K V RASTOGI Project Supdt (Granite) Rajasthan State Granites and Marbles Limited, E-17/18 MI Area Phase-11, Basni Jodhpur 342005	2nd Intl Conf on Technology for Development at Cairo, Egypt from 20-23 March 1982	-do-
74.	DR L P SINGH Professor of Eleetrical Engineering Department of Electrical Engineering Indian Institute of Technology, IIT PO, Kanpur 208016	IEEE Winter Power Meeting at New York from 31st January to 5th February 1982	-do-

1	2	3	4
75.	DR S SRINIVASA MURTHY Assistant Professor Refrigeration and Airconditioning Lab. Department of Mechanical Engineering Indian Institute of Technology Madras 600036	Meeting of the Intl Instt of Refrigeration at Jerusalem, Israel from 14-19 March 1982	-do-
76.	DR AMOD PRAKASH Reader and Consultant in Obstetrics and Gynaecology Institute of Medical Sciences Banaras Hindu Univ. Varanasi 221005	2nd Asia Oceania Congress of Perinatology at Auckland from 10-13 February 1982	-do-
77.	DR J L MINOCHA Senior Geneticist Genetics Department Punjab Agril Univ. Ludhiana 141004	Industrial Symposium on New Genetical Approaches to Crop Improvement at Karachi, Pakistan from 6-10 February 1982	Rs. 2000/-
78.	DR D LALITHA KUMARI Centre for Advanced Study, in Botany Madras University Madras 600005	Intl Conf on Plant Protection in the Tropics at Kuala Lumpur, Malaysia from 1-4 March 1982	Rs. 4000/-
79.	DR D K GHOSH Microwave Spectroscopy Section Saha Institute of Nuclear Physics 92 APC Road Calcutta 700019	9th Austin Symp on Molecular Structure at Austin, USA from 1-3 March 1982	-do-

1	2	3	4
80.	DR M A GOPINATH Associate Professor Documentation Research and Training Centre, Indian Statistical Institute 31 Church Street Bangalore 560001	Symposium on Chemical Information Division at Las Vegas, Novada, USA on 30th March 1982	-do-
81.	DR SANKAR MUKHOPADHYAY Department of Plant Pathology, Bidhan Krishi Viswavidyalaya Kalyani 741235 (WB)	Intl Conf on Plant Protection in the Tropics from 1-4 March 1982 at Kuala Lumpur, Malaysia	-do-
82.	DR B R S REDDY Assistant Professor Department of Biomedical Engg. Institute of Aviation Medicine, IAF Bangalore 560017	X North East Bio-Engg Conf 1982 at Hanover, USA from 15-17 March 1982	-do-
83.	DR S K DATTA Associate Professor Instt of Nuclear Physics 92 APC Road Calcutta 9	Intl Symp on Quantum Chemistry and Quantum Theory of Condensed Matter at Florida, USA from 8-13 March 1982	-do-
84.	DR J A K TAREEN Mineralogical Institute Mysore Univ., Mysore	Intl Symp on Hydrothermal Reaction at Tokyo, Japan from 22-26 March 1982	-do-

ANNEXURE XII

TRAVEL GRANTS UNDER INSA-COSTED TRAVEL FELLOWSHIPS

S. No.	*Name & address of the delegate*	*Name of the Conference place and date*	*Financial support*
1	2	3	4
1.	SHRI T BALAKRISHNA BHAT Scientist 'B' Defence Metallurgical Research Laboratory PO-Kanchanbagh Hyderabad 500258	International Conference on Creep and Fractures of Engg. Materials and Structure at Swansea (UK) in March, 1981	25% fare
2.	DR A J JOSHI Department of Botany Sir PP Institute of Science (Bhavnagar University) Bhavnagar 364002	Post Doctoral Training in Plant Physiology at Wien, Austria in March, 1981	25% fare
3.	DR J N CHAKRABARI Department of Chemistry, Fule and Metallurgy, Indian School of Mines Dhanbad 826004	International Symposium on Advances in Coal Characterisation in USA in March-April, 1981	Rs. 2500/-
4.	DR S SIVARAMAN Asstt. Prof of Zoology Loyola College Madras 600034	International Conference at American Arachnological Society - Knoville, USA from 5-9 August, 1981	Rs. 3500/-

1	2	3	4
5.	DR AVIJIT BANERJI Department of Pure Chemistry, University College of Science 92 Acharya Prafulla Chadra Road Calcutta 700009	First Asian & Pacific Chemistry Congress at Singapore from 26th April to 1st May, 1981	Rs. 2000/-
6.	DR A S RAGHAVENDRA Lecturer in Botany Sri Venkateswara Univ. Tirupati 517502	13th International Botanical Congress at Sydney (Australia) from 21-28 August, 1981	25% fare
7.	DR (MISS) AMITA PAL Research Assistant Botany Department Calcutta University Calcutta 700019	Symposium on Progress of Plant Tissue Culture in Developing Countries at Singapore from 28-30 April, 1981	25% fare
8.	DR RAJESH PANDEY Research Associate Physical Research Lab. Navrang pura Ahmedabad 380009	URSI General Assembly in Washington in August, 1981	25% fare
9.	DR N K MONDAL Research Associate HECR Group Tata Institute of Fundamental Research Homi Bhabha Road Bombay 400005	1981 CERN-JINR School of Physics at Hanko, Finland	25% fare
10.	DR B S GOHIL Remote Sensing Area Space Application Centre Jodhpur Tekra Ahmedabad 380053	URSI General Assembly in Washington in August, 1981	25% fare

1	2	3	4
11.	DR A SEN GUPTA Scientist B T & F Section National Physical Lab. Hillside Road New Delhi 110012	-do-	25% fare
12.	DR M VIKRAM REDDY Asstt. Prof N.E. Hill University College of Agriculture Medziphema 797106 Nagaland	Darwin Cenetary Symposium on Earthworm Ecology at Grangeover-Sands, Cumbria UK from 29th August to 4th September, 1981	Rs. 1500/-
13.	MR W SELVA-MURTHY Scientist 'C' Defence Institute of Physiology and Allied Sciences Delhi Cantt 110010	9th International Congress of Biometerology at Osnabrueck and Stuttquart-Hehenheim, FRG from 23 September to 1st October, 1981	Rs. 2000/-
14.	DR PRAKASH CHANDRA SHARMA Lecturer in Physics Banaras Hindu University Varanasi 221005	XVIth International Conference on Low Temperature Physics at California University in Los Angeles from 19-25 August, 81 and International Conference on Phonon Physics at Indian University Bloomington, USA from 31 August to 3 September, 1981	Rs. 2000/-

ACCOUNTS OF THE
INDIAN NATIONAL SCIENCE ACADEMY
1981-82

AUDITOR'S REPORT

We have audited the annexed Balance Sheet of the Indian National Science Academy as at 31st March, 1982 and also the relevant income & Expenditure Account and Receipts & Payments Accounts of the Academy for the year ended on that date with the help of books of account and vouchers relating thereto.

We report that to the best of our information and according to the explanations given to us, in our opinion, the Balance Sheet read with notes thereon, shows a true and correct state of affairs of the Academy and the Income & Expenditure Account gives a true and fair view of thc excess of Income over expenditure of the Academy subject to the following:

Grant-in-aid received by the Academy for the 21st International Geographical Congress and the assets acquired out of that grant have not been shown in the annexed Balance Sheet and Income and Expenditure Account of the Academy as the separate accounts have been prepared for the same.

for LODHA & COMPANY
Chartered Accountants
Sd/- P K Jain
Partner

12 Bhagat Singh Marg
New Delhi-110001
Dated: 22 September 1982

INDIAN NATIONAL SCIENCE ACADEMY

BALANCE SHEET AS ON 31ST MARCH 1982

LIABILITIES	Amount Rs.	Amount Rs.	Amount Rs.	ASSETS	Amount Rs.	Amount Rs.
Funds				*Fixed Assets*		
(As per Schedule 'A')			25,63,126.22	*Building Equipment*		
Employees Provident Fund				(As per Schedule 'D')		19,56,745.38
(As per Last Balance Sheet)	6,34,656.43			*Furniture, Fixtures & Equipment*		
Add : CPF Subscription	44,503.00			(As per Schedule 'E'	4,93,776.53	
GPF Subscription	41,302.00			(As per Schedule 'F')	3,31,669.59	8,25,446.12
Academy's Contribution	13,734.00					
Interest on Provident Fund	39,182.00			*Books & Journals*		
	7,73,377.43			(As per Schedule 'G')		32,35,185.62
Less : Final Payments	76,253.65			*Investments*		
Funds Against Government Grants			6,97,123.78	(As per Schedule 'H')		9,17,864.24
(As per Last Balance Sheet			7,26,257.88	*Other Deposits*		
New Book Block Furnishing Grant Fund				(As per Schedule 'I')		5,05,871.33
(As per Last Balance Sheet)			48,954.80	*Gold Medals in Hand*		
Library Grant Fund				S. Ramanujan Medal 1966 & 1968	1,545.90	
(As per Last Balance Sheet)			6,15,015.92	S. Ramanujan Medal 1974	6,825.20	8,371.10

Fellowship Admission & Compounding Fee			
(As per Last Balance Sheet)	96,008.00		
Additions during the year	7,366.10		
		1,03,374.10	
Capitalised Expenditure Account			
(As per Schedule 'B')		26,76,279.43	
Other Liabilities			
(As per Schedule 'C')		20,229.69	
Advances		3,39,545.16	
Income & Expenditure Account			
Unspent Balance as per Schedule 'K'	1,86,649.25		
Income as per Income & Expenditure Account	7,60,703.58		
	9,47,352.83		
Less : Transferred to Capitalised Account			
Non-Recurring	3,78,954.41		
General Fund	54,019.18		
Advance	1,50,138.57		
C/F	5,83,112.16	9,47,352.83	77.89,906.98

Advances	
(As per Schedule 'J')	3,39,545.16
Advances to Staff Against Provident Fund	2,07,983.00
Security Deposit (DESU)	1,405.00
Fellowship subscription Outstanding	506.80
C/F	79,98,923.75

Balance Sheet as on 31st March 1982 (Contd.)

LIABILITIES	Amount Rs.	Amount Rs.	Amount Rs,	ASSETS	Amount Rs.	Amount Rs.
B/F	5,83,112.16	9,47,352.83	79,98,923.75	B/F		79,98,923.75
Subscriptions to Journals	1,55,223.90	7,38,336.06	2,09,016.77			
(As per Schedule 'K')		Total :	79,98,923.75		Total :	79,98,923.75

Subject to our report of even date.

Notes: 1. Stock of Publications of the Academy as on 31st March 1982 has not been included in the Balance Sheet, whereas, the same is the property of the Academy.
2. No depreciation has been provided on Fixed Assets.
3. Fixed asset register is not upto date and its physical verification has not been done.
4. The books of account have been maintained on cash basis.

12, Bhagat Singh Marg
New Delhi-110001
Dated : 22 Srpt. 1982

for LODHA & CO.
Chartered Accountants
Sd/- P K JAIN
Pattner

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

INCOME & EPPENDITURE ACCOUNT FOR THE YEAR ENDING 31ST MARCH 1982

EXPENDITURE	Amount Rs.	Amount Rs.	INCOME		Amount Rs.	Amount Rs.
Non-Plan			*Government Grant-in-Aid*			
i) Normal Activities	26,08,373.34		i) Non-Plan		33,35,000.00	
ii) ICSU	7,38,889.81		ii) ICSU Subscription		4,80,400.00	
iii) ICSU Subscriptions	5,00,189.49	38,47,452.64	iii) Plan		40,50,000.00	
Plan			iv) Award to Young Scientists		2,50,000.00	
i) History of Science	2,88,785.10		v) Chinese Delegations		20,000,00	
ii) Basic Sciences	19,77,943.04		vi) *Avicenna Seminar*			
iii) Indo Soviet Collaborative Programme	4,37,995.28		a) Govt. Grant DST	1,00,000.00		
iv) Exchange of Scientist Programme	5,83,769·16		b) Ministry of Education	80,000.00		
v) Documentation & Publications	24,761.42		c) Others	6,233.72	1,86,233.72	83,21,633.72
vi) Salaries/Travelling/ Contingencies	3,46,452.31		*Other Receipts*			
vii) Avicenna Seminar	2,39,596.31	38,99,302.62	i) Non Plan		2,93,849.56	
			ii) Plan		25,130.34	3,18,979.90
C/F		77,46,755.26	C/F			86,40,613.62

Income & Expenditure Account for the your ending 31st March 1982 (Contd.)

EXPENDITURE	Amount Rs.	Amount Rs.	INCOME	Amount Rs.	Amount Rs.
B/F		77,46,755.26	B/F		86,40,613.62
Award to Young Scientists		2,06,052.05	iii) AAAS—Global Seminar		54,593.70
Chinese Delegation		35,280.01	iv) General Fund		78,117.06
Other Schemes			v) UNESC Project		7,800.00
AAAS Global Seminar		8,235.60			
General Fund		24,097.88			
		80,20,420.80			
Excess of Income over Expenditure		7,60,703.58			
	Total :	87,81,124.38			87,81,124.38

12 Bhagat Singh Marg
New Delhi-110001
Dated : 22 Sept. 1982

for LODHA & CO.
Chartered Accountants
Sd/- P K JAIN
Partner

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

INDIAN NATIONAL SCIENCE ACADEMY

RECEIPTS & PAYMENTS FOR THE YEAR ENDING 31ST MARCH 1982

NON-PLAN ACTIVITY

RECEIPTS	Amount Rs.	Amount Rs.	PAYMENTS		Amount Rs.	Amount Rs.
Establishment:			a) Staff Salaries		10,27,698.05	
Unspent Balance (Non Plan)	59,184.09		b) CPF Contribution		10,608.00	
Overspent on ICSU subscription	(—) 32,361.30	26,822.79	c) *Pensionery Benefits*:			
Govt. Crent-in-aid			i) Pension & Commuted Value of Pension	7,029.00		
i) During the year		33,35,000.00	ii) Pension	12,119.40		
ii) ICSU Subscription Govt. grant-in-aid		4,80,400.00	iii) Gratuity	28,598.25	47,746.65	
iii) Academy's Contributions to CPF withheld		18,010.65	d) *Facilities to Staff*			
Other Receipts			i) LTC	20.335.90		
Sale of Publications INSA	1.69,813.65		ii) Medical Facilities	36,796.40		
Interest on Fixed Deposits (P. Fund)	58,126.81		iii) Reimbursement of Tution fee	801.50	57,933.80	11,43,986.50
Interest on Conveyance Advance	782.40		Travelling Expenses (Meetings of the Council, Sectional Committees, Medal Committees etc.)			2,77,189.21
House Rent Recovery	631.30					
Sale of Greeting Cards	1,178.00	2,30,532.16				
B/F		40,90,765.60	B/F			14,21,175.71

Recipts and Payments for the year endiug 31st March 1982 (Contd.)

RECEIPTS	Amount Rs.	Amount Rs.	PAYMENTS	Amount Rs.	Amount Rs.
B/F		40,90,765.60	B/F		14,21,175.71
Pension Contribution :			*Contingencies*		
i) Dr B V Subbarayappa (Nehru Centre)	33,403.00		(As per Annexure 'A')		5,87,229.62
ii) Shri Lalit Mohan	391.60		*Publications*:		
iii) Shri C M Gaind	116,85		Publication-Indian Journal of Pure Applied		
iv) Shri D K Kaushik	68.60		Mathematics	1,05,188.13	
			Purchase of Paper	2,12,574.16	
		33,980.05	Publication Proceedings	1,01,672.94	
Leave Salary Contribution from :			Miscellaneous Publications	79,213.13	
i) Nehru Centre, Bombay	1,650.00		Biographical Memoirs	308.30	4,98,956.66
ii) CSIR New Delhi	8,460.00				
	10,110.00		Publication Grants to the Societies		
Redmbursement of Leave Salary to Nehru Centre (in r/o Dr B V Subbanyappa)	(—) 4,898.05		(As per Annexure 'B')		56,000.00
			Purchase of and Subscription to Journals		1,55,223.90
		5,211.95	Interest on Employees Provident Fund		39,182.00
Miscellaneous Receipts		4,614.75	Popularization of Sciences		3,299.00
Total Grant from Haryana Agricultural University, Hissar		1,500.00	Expenditure on Local Chapter & Regional Unit		2,530.35

Adjustment of Previous Year Advances :			*ICSU Activities*:		
Local Chapter	1,507.95		i) Delegations ICSU		
Secretarial Assistance	1,204.71		(As per Annexure 'C')	6,18,949.16	
Festival Advance	7,700.00		ii) Printing of Scientific Report	5,733.80	
Conveyance Advance	5,754.00		iii) Secretarial Assistance	1,475.40	
LTC Advance	17,159.15		iv) Travelling	1,12,731.45	7,38,889.81
Sundry Advances	504.80				
TA/DA Advance	500.00		ICSU Subscription		5,00,189.49
Puja Advance	380.00		*Advances*		
Postage Advance	462.85		Local Chapter	3,711.28	
		35,173.46	Secretarial Assistance ICSU	1,688.12	
			Festival Advance	9,200.00	
			Conveyance Advance	9,518.00	
			L.T.C.	14,699.00	
			Sundry Advance	23,085.52	
			Popularisation of Sciences	500.00	
			ICSU Delegations	2895.00	
			Puja Advances	600.00	65,897.92
					40,68,574.46
			Unspent Balance		1,02,671.35
		Total : 41,71,245.81		Total :	41,71,245.81

12, Bhagat Singh Marg
New Delhi-110001
Dated : 22 Sept. 1982

for LODHA & CO.
Chartered Accountant
Sd/ P K JAIN
Partner

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

RECEIPTS & PAYMENTS ACCOUNT FOR THE YEAR ENDING 31ST MARCH 1982

PLAN SCHEME

RECEIPTS	Amount Rs.	Amount Rs.	PAYMENTS	Amount Rs.	Amount Rs.
Unspent Balance		27,747.87	*Expenditure on Plan Schemes*		
Government Grant-in-Aid		40,50,000.00	Staff Salaries	1,57,307.15	
Other Receipts			Medical Allowance	3,924.25	
Unspent Balance from Basic Sciences projects		25.130.34	Provident Fund Contribution	3,126.00	1,64,357.40
Advances against Adjustments (B.S.)			Travelling : (All Schemes under Plan)		1,03,391.08
i) Project Leaders	2,521.69		Contingencies (Telephones, Printing & Stationery,		
ii) House Building Advance	9,122.00		Daily Wages)		78,703.83
iii) History of Science	1,000.00		*Basic Sciences Research & Research Training*		
iv) C.S.I.R. (Solar Eclipse)	3,727.20		Expenditure on Projects-Grant-in-Aid to Institutions		
v) Prof. F. Ahmad	5,600.00		(As per Annexure D)	15,61,849.51	
vi) Indo-Soviet	390.00	22,360.89	Contingencies, Chemicals & Glasswares	2,396.69	
Unspent Balance C.S.I.R.	1,00,000.00			15,64, 246.20	
Govt. Grant D.S.T.	1,00,000.00				
Govt. Grant from Ministry of Education	80,000.00				
Unspent Balance from Guru Nanak Dev University, Amritsar	6,233.72	2,86,233.72	*Symposia & Seminars*		
			i) Support for Symposia (As per Annexure E)	3,40,000.00	
		44,11,472.82			

ii) Symposia of the Academy (as per Annexure F)	73,696.84		
History of Sciences in India	———		19,77,943.04
Publications			
i) Printing of IJHS	32,686.75		
ii) Printing of Medieval Period Bibliographies	1,000.00		
iii) Printing of Sisyadhivriddida Tantra	27,607.90		
iv) Printing of Sisyadhivriddvida the Vatesvara Siddhanta	639.32		
v) Critical Edition of Brihat Samhita Commidentry Utoalaprimeta	2,794.00		
vi) Procurement of Source Material	1,683.96		
vii) Honorarium to Authors	4,244.00		
viii) Lecture Programme	1,371.00		
ix) Stipend to Research Fellows	7,200.00		
x) Research in Identified Areas Grants to Institutions	1,39,780.97		
xi) Delegation of Dr. A.K. Bag to Bucharest (Romania)	22,926.00		
C/F	44,11,472.82	C/F	241,933.90	23,24,395.35

Receipts and Payments for the year ending 31st March 1982 (Contd.)

RECEIPTS	Amount Rs.	Amount Rs.	PAYMENTS	Amount Rs.	Amount Rs.
B/F		44,11,472.82	B/F	2,41,933.90	23,24,395.35
			xii) Delegation of Dr. S.R. Rao in the 16th International Congress of History of Sciences, Bucharest	3,252.00	
			xiii) *Symposia/Seminars* Bilateral Seminar at Bombay	43,599.20	2,88,785.10
			Collaborative Programme		
			(1) *Indo-Soviet*		
			i) Visit by Indian Scientists	97,382.00	
			ii) Visit by Soviet Scientists	2,37,938.06	
			iii) Symposia/Seminars	1,02,675.22	4,37,995.28
			(2) *Exchange of Scientists*		
			(a) INSA-RS Programme		
			i) Visit by Indian Scientists	68,056.00	
			ii) Visit by Japanese Scientists	1,10,386.96	

		(c) INSA/USSR Exchange		
		Programme		
		i) Visit by Indian Scientists	1,30,369.50	
		ii) Visit by Japanese Scientists	1,73,349.15	
		(c) *INSA-Hungary Exchange Programme*		
		i) Visit by Hungarian Scientists	4,140.60	
		ii) Visit by Indian Scientists to Hungary	45,368.40	
		iii) Miscellaneous Visits : (As per Annexure G)	52,098.55	5,83,769.16
		Documentation & Publication (Cost of Materials for Photo-stat machine)		24,761.42
		Birth Anniversary of Avicenna Seminar at Delhi		
		i) Printing & Stationery	12,676.53	
		ii) International Airfare/ T.A./D.A.	1,65,100.00	
		iii) Refreshments/Lunch/Central Programme	23,900.00	
C/F	44,11,472.82	C/F	2,01,676.53	36,59,706.31

Receipts and Payments for the year ending 31st March 1982 (Contd.)

RECEIPTS	Amount Rs.	Amount Rs.	PAYMENTS	Amount Rs.	Amount Rs.
B/F		44,11,472.82	B/F	201,676.53	36,59,706.31
Overspent Balance		559.21	iv) Per diem to foreign delegates	7,700.00	
			v) Miscellaneous Expeused Local Conveyance/Honorarium	12,000.00	
			Regional Seminar (Lucknow)		
			a) Grant-in-Aid Lucknow University	10,000.00	
			b) Grant-in-Aid General Secretary, Asiatic Society Calcutta	8,219.78	2,39,596.31
			Non-Recurring		
			Library Books (Main Office)	59,854.43	
			(History of Science)	17,824.31	
			Addition & Alterations of offices		
			i) Calcutta Office	4,176.50	
			ii) Delhi Office	64,672.28	
			iii) Auditorium	1,35,502.49	
			Furnirure & Fitiure & Equipment	72,925.62	

Instalation of Inter-Communication System	3,786.28		
Library Fittings	20,212,50	3,78,954.41	
Advances			
a) History of Sciences	250.00		
b) House Bullding Advance	1,29,525.00		
c) Avicina Seminar (Shri A.S Khan)	4,000.00	1,33.775.00	
		Total	44,12,032.03

Total: 44,12,032.03

12, Bhagat Singh Marg
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Dated: 22 Sept. 1982

For LODHA & CO
Chartered Accountants
Sd/- P K JAIN
Partner

Sd/- A K BOSE
Executive Seeretary

Sd/- C P AGARWAL
Accounts Officer

RECEIPTS & PAYMENTS ACCOUNT FOR THE YEAR ENDING 31ST MARCH 1982

AWARD TO YOUNG SCIENTISTS

RECEIPTS	Amount Rs.	Amount Rs.	PAYMENTS	Amount Rs.	Amount Rs.
Govt-Grant-in-Aid		2,50,000.00	Cash Prize to Young Scientists		1,00,000.00
			Travelling, Preparation of Lecture, Advertisements, Contingencies etc.		27,242.65
			Non-ICSU Delegations (As per Annexure H.)		50,445.00
			INSA-COSTED Travel Fellowship (As per Annexure I)		28,364.40
			Advances to Delegates		8,000.00
					2,14,052.05
				Unspent Balance	35,947.95
	Totai :	2,50,000.00		Total :	2,50,000.00

for LODHA & CO
Chartered Accountants
Sd/- P K JAIN
Pattner

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

12, Bhagat Singh Marg
New Delhi 110001
Dated: 22 Sept. 1982

RECEIPTS & PAYMENTS ACCOUNTS FOR THE YEAR ENDING 31ST MARCH 1982

GENERAL FUND

RECEIPTS	Amount Rs.	Amount Rs.	PAYMENTS	Amount Rs.	Amount Rs.
Fellowship Subscription 1982		2,587.57	Honorarium		13,500.00
Interest on Investments		56,707.69	Medals		4,892.85
Misc. Income		401.50	Expenditure on Guest Room		5,705.03
Guest Room Receipts		18,420.30			24,097.88
			Unspent Balance		54,019.18
		78,117.06			78,117.06

12 Bhagat Singh Marg
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22 Sept. 1982

for LODHA & CO.
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Partner

A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

ANNEXURE 'A'

	Amount Rs.	Amount Rs.
Property Tax		48,146,00
Ground Rent		5,478.65
Postage Expenses (Delhi, Calcutta)		1,04,066.00
Telephone Trunk Calls & Phonograms		45,284.66
Telephone (office bearers)		11,641.81
Printing & Stationary		1,40669.13
Electricity & water		52,550.62
Local Conveyance		17,148.27
Advertisement (Recruitment)	8,816.00	
Advertisement (others)	3,815.00	12,631.00
Maintenance of Lawns & Gardens		1,345.34
Maintance of INSA Building		20,211.74
Maintenance of Machines		46,935,81
Maintenance of Motor Cycle		4,026.27
Secretarial Assistance		2,925.00
Uniform to Class IV Employees		7,557.33
Payment to Daily Wages Canteen Bearers		9,260.00
Audit Fee		1,250.00
Binding Charges		4,954.80
Electrical Goods		11,901.88
Expenses on INSA Canteen		1,608.00
Bank Charges		450.64
Meeting Expenses		14,413.61
Miscellaneous Expenses		7,430.41
Clearing Charges		1,026.80
Architect Fee		2,000.00
Consumable Stores		4,855.85
Payment of Daily Wages		7,460.00
	Total :	5,87,229.62

for LODHA & CO.
Chartered Accountants
Sd/- P K JAIN
Partner

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

12, Bhagat Singh Marg
New Delhi 110001
Dated: 22 Sept. 1982

ANNEXURE 'B'

Support for Publication Grants to Scientific Societies

		Amount Rs.
1.	The Indian Science News Association Calcutta	3000.00
2.	The Current Science Association, Bangalore	5000.00
3.	The Asiatic Society, Calcutta	5000.00
4.	The Accoustical Society of India, New Delhi	3000.00
5.	The National Academy of Sciences, Allahabad	3000.00
6.	The Calcutta Mathematical Society, Calcutta	1000.00
7.	The Bombay Natural History of Society, Bombay	5000.00
8.	The Indian Society of Earth Sciences, Calcutta	3000.00
9.	The Astronomical Society of India, Calcutta	3000.00
10.	The Institution of Chemists (India), Calcutta	1000.00
11.	The Indian Science Congress Association, Calcutta	3000.00
12.	Indian Chemical Society, Calcutta 1980-81 & 1981-82	6000.00
13.	Intr. Society of Plant Morphologist, New Delhi	4000.00
14.	The Entomological Society of India, New Delhi 1980-81 & 81-82	4000.00
15.	The Indian Society & Genetics and Plant Breeding IARI New Delhi 1980-81, 1981-82	7000.00
	Total:	56,000.00

for LODHA & CO.
Chartered Accountants
Sd/- P K JAIN
Partner
12, Bhagat Singh Marg
New Delhi 11000
Dated: 22 Sept. 1982

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

ANNEXURE 'C'

Sl. No.	Name of the Conference	Name of the Delegate	Financial support granted by the INSA
1.	5th International Conference on Fracture at Cannes, France from 26 March to 3 April, 1981	Dr A C Garg	3,854.00
2.	International Congress of Acoustics at Achen, (W. Germany) form 28-30, April, 1981.	Dr B S Ramakrishna	5,423.00
3.	International Symposium on Rainfall Runoff Modelling at Mississippi, USA from 17-21 May, 1981.	Dr K N Muterja	9,024.00
4.	27th IUPAC Symp. on Macromolecules at Strasbourg, France from 6-9 July, 1981.	Dr P C Banerjee	4,452.00
5.	6th International Symposium on Caratenoids at Liverpool, UK from 26-31 July, 1981	Dr J Ganguly	6,919.00
6.	17th International Cosmic Ray Conference at Paris, France from 13-25, July 1981	Dr S A Stephens	4,074.00
7.	8th International Conf. of Pharmacology at Tokyo, Japan from 19-24, July 1981	Dr B N Dhawan	13,346.00
8.	—do—	Dr K K Agarwal	12,226.00
9.	—do—	Dr P Sen	10,240.00

10.	—do—	Dr (Mrs) V N Dadkar	11,247.24
11.	—do—	Dr K P Bhargava	14,631.00
12.	21st Assembly of IASPET at London; Ontario, Canada, from 21-30 July, 1981	Dr J G Negi	11,809.00
13.	Symposium No. 97 Extragalactic Radio Sources at Albuquarque, USA from 3-7 Aug., 1981	Dr V K Kapahi	9,891.00
14.	General Meeting for Asian Pacific Region at Bandung Indonesia from 31 Aug. to 4 Sept., 81	Dr K K Scaria	6.207.70
15.	13th International Botanical Congress at Sydney, Australia from 21-25 August 1981	Prof B M Johri	13,714.00
16.	—do—	Prof C V Subramanian	12,292.00
17.	—do—	Prof D D Pant	5,463.00
18.	—do—	Dr A K Chatterjee	11,950.30
19.	—do—	Prof R N Kapil	5,462.00
20.	—do—	Dr C K Varshney	4,000.00
21.	6th International Conference on Chemical Education at Maryland USA from 9-14, Aug., 1981	Dr K V Sane	5,018.00

Cont

Annexure 'C' (Contd.)

Sl. No.	Name of the Conference	Name of the Delegate	Financial support granted by the INSA
22.	6th International Conference on Chemical Education at Maryland USA from 9-14, August 1981	Dr S V Easwaran	1,777.00
23.	8th International Conference of Heterocyclic Chemistry at Grak Austria from 25-28 Aug., 81	Dr K N Trivedi	9,651,00
24.	—do—	Dr N S Narasimhan	7,143.50
25.	12th International Congress and General Assembly of IUCr at Ottawa, Canada from 15-25 August, 1981	Prof S Ramaseshan	6,879.00
26.	—do—	Prof N N Saha	3,520.00
27.	—do—	Dr S Parthasarthy	9,484,00
28.	—do—	Dr S P Sengupta	9,394.00
29.	—do—	Dr G Singh	1,904.00
30.	IAGA Assembly at Edinburgh, UK, from 5-15 August 1981	Dr Y S Somayajulu	11,133.86
31.	III Scientific Assembly of IAMAP, Hamburg, 17-29 August 1981	Dr A P Mitra	13,185.85

32.	-do-	Dr B H Subbaraya	12,182.00
33.	8th Triennial World Congress of International Federation of Automatic Control at Kyoto, Japan from 24-25 August 1981	Dr V V Athani	10,094.00
34.	5th Internal Meeting on Ferroelectricity at Pennsylvania, USA from 17-22 August 1981	Dr E C Subbarao	5,913.69
35.	-do-	Dr (Mrs) A Bhanumati	2,000.00
36.	-do-	Dr B K Chaudhuri	8,706.00
37.	7th International Bio-Physics Congress and 3rd American Biochemistry Congress at Mexico from 23-28 August 1981	Dr D P Burma	11,822.01
38.	-do-	Dr D Balasubramanian	11,976.31
39.	URSI General Assembly and other Open Symposia at Washington, D.C. USA from 10-18 August 1981	Dr A K Saha	11,7 3.00
40.	XXth General Assembly of URSI and other Open Symposia at Washington USA, from 10-18, Augsut '81	Dr K M Kotadia	724.00
		Dr N V G Sarma	11,348·00
41.	-do-	Dr A Sen Gupta	3,610.00
42.	16th International Congress of History of Science at Bucharest, Romania from 26th August to 3 September, 1981	Dr B V Subbarayappa	13,614.00
43.	-do-	Dr S M R Ansari	12,566 00
44.	-do-	Sri S R Rao	11,549.00

Cohtd.

Annexure 'C' (Contd.)

Sl. No.	Name of the Conference	Name of the Delegate	Financial support granted by the INSA
45.	5th International Coll on Binary and Multiple start and Tracers of Stellar Evolution from 31 August to 3 September 1981	Prof K D Abhyankar	7,185.000
46.	Collcquium No. 66 at Crimea, USSR from 1-5 September 1981	Dr S K Alurkar	8,136·
47.	IUPAP General Assembly at Paris, France from 1-3 September 1981	Prof N A Narasimham	15.358.00
48.	-do-	Dr B V Sreekantan	20,605.00
49.	-do-	Prof M G K Menon	440.000
50.	-do-	Prof B R Rao	8,202.00
51.	International Thin Film Congress at Israel from 21-25 September 1981	Dr K L Chopra	5,000.00
52.	IAVCEI Symposium on Arc Volcanism at Tokyo, Japan from 30th August-6 September '81	Dr V K Gaur	9,270.00
53.	IUIS Council Meeting at Lucerne, Switzerland on 27-9-1981	Prof G P Talwar	3,591.00

54.	XV International Congress of the Theoretical & Applied Mechanics of IUTAM at Toroncta (Canada) form 17-23 August 1980 (Pre year)	Dr K S Yajmik	426.00
55.	XXIV International Geographical Congress at Tokyo (Japan/ from 1-5 September 1980 (Pre year)	Prof Mohmad Safi	4,129.66
56.	7th International Congress of Neurological Surgery at Munich from 12-18 July 1981	Prof P N Tandon	13,494.00
57.	International Conference on Creep and Fracture of Engineering Materials & Components at University College of Swansea, Great Britain from 24-27 May 1981	Dr Balkrishna Bhat	3,895.00
58.	International Symposium on 'Evolution and Biosystematics of Applieds at Warsaw (Poland from April 5-11, 1981)	Dr Samiram Chakraborti	3,498.00
59.	5th International Conference on Fracture (ICFS) Cannes, France from 29th March to 3rd April 1981	Dr P Rama Rao	2,542.00
60.	International Geographical Congress at Tokyo	Dr Indra Pal	2,000.00
61.	International Symposium on Parasitic Discares of the N. System at Switzerland	Dr P N Tandon	7,227.25

Contd.

Annexure 'C' (Contd.)

Sl. No.	Name of the Conference	Name of the Delegate	Financial support granted by the INSA
62.	International IEES/APS Symposium at Loss Angeles, USA from 15-19 June, 1981	Dr G P Srivastava	1,613.00
63.	Mendelsor Congress on General and Applied Chemistry at Baku, USSR from 21-26 September 1981	Prof M L Nigam	12,444,00
64.	Meeting on Ciliate Molecular Biology at Boulder, Colorade from 17-20 August 1981	Prof C M S Dass	2620.80
65.	Joint Meeting of the International Association for Study of liver (IASL) and Asian Facific Association for Study of Liver (ABSL)	Dr N C Nayak	2,268.00
66.	36 Industrial Waste Disposal Conference at Purdue, Indiana, USA from 12-24 May 1981	Dr S K Srivastava	4,000.00
67.	34 Session of International Committee for Coal Petrology at Pau, Franco, from 5-11 April '81	Dr B C Mukherjee	4,000.00
68.	17th International Cosmic Ray Conference at Paris, France from 13-25 July 1981	Dr D P Bhattacharya	1,665.00
69.	3rd International Conference on Polymers in Concrete at Korlyama, Japan from 13-15 May 1981	Prof S N Deshpande	4,000.00

70.	8th International Thermal Symposium at Maryland, USA from 15-19 June 1981	Dr K S Murthy	4,000.00
71.	7th Colloquium on High Resolution Molecular Spectroscopy at Reading, U.K. from 14-18 September 1981	Prof Krishnaji	1,000.00
72.	SMY Workshop at Annescy from 26-31 October 1981	Dr S S Dagaonkar	4,000.00
73.	International Congress of International Society of Developmental Biology at Basel, Switzerland	Sh B L Lokeshwar	675.00
74.	International Conference on Defects in Insulating Crystals at Riga (USSR) from 18-23 May 1981	Dr M L Mukherjee	2,098.00
75.	International Conference on Plant Virus Disease Epidemilogy at Oxford, U.K. from 27-31 July 1971	Dr S P Raychaudhuri	4,000,00
76.	Conference & Exhibition (Ultrasonic International '81) at Brighton, U.K. from 30th June to 2nd July '81	Dr V N Bindal	4,000.00
77.	IX International Symposium on Comparative Endocrinology at Hongkong, from 7-11 December 1981	Dr S Bhattacharya	4,000.00

Contd.

Annexure 'C' (Contd.)

Sl. No.	Name of the Conference	Name of the Delegate	Financial support granted by the INSA
78.	3rd International Symposium on Magnesium at Badan—Badan, West Germany from 22-28 August 1981	Dr B C Chaparwal	4,000.00
79.	Microneurosurgical Symposium at Frankfurt 8-11 July 1981 Congress of Neurosurgical Surgeons at Munich 12-18 July 1981	Dr Brahm Prakash	4,000.00
80.	XX International Congress of Permanent Commission and International Association of Occupational Health at Cairo in September 1981.	Dr S S Bhutada	4,000.00
81.	WHO-SFM Meeting on Mycobacterium Laprae and other Mycobacteria at Paris from 4-5 September 1981	Prof T Ramakrishnan	4,000.00
82.	VI International Congress of Human Genetics at Tel Aviv on 13-18 September 1981	Dr Y R Ahuja	4,000.00
83.	7th Asia Pacific Congress on Diseases of the Chest at Hong Kong from 1-5 November 1981	Dr R Viswanathan	4,000.00

84.	International Cancer Conference at Nagoy, Japan from 25-29 August 1981	Dr P N Wahi	4,000.00
85.	8th International Coll on Gasdynamics of Explosions and Reactive Systems at Minsk, USSR from 24-28 August 1981	Dr M P Ranga Rao	2,499.00
86.	International Congress on the History of Turkish-Islamic Science and Technology at Istanbul, Turkey during 14-18 September 1981	Dr A J Qaisar	574.00
87.	International Conference on Modelling and Simulation at Layon, France from 7-11 September 1961	Dr J Nanda	950.00
88.	4th International Symposium on Orbital Disorders at Amsterdam from 31 August to 2nd September 1981	Dr D K Sen	4,000.00
89.	4th International Conference on Rapidly Quenched Metals at Sendai, Japan from 24-28th August 1981	Dr C Suryanarayana	4,000.00
90.	Conference on Defects in Metals at Japan in November 1981	Dr K Krishan	4,000.00
91.	9th International Symposium on Comparative Endocrinology at Hong Kong from 7-11 December 1981	Prof. Asok Ghosh	2,330.00

Contd.

Annexure 'C' (Contd.)

Sl. No.	Name of the Conference	Name of the Delegate	Financial support granted by the INSA
92.	VIII Asian and Oceanic Congress of Obstetrics and Gynaecology at Melbourne, Australia from 25-31st October 1981	Dr N Agarwal	4,000.00
93.	Symposium. on Engineering Sciences and Mechanics at Taiwan from 28th December 1981 to 1 January 1982	Dr Krishna Kumar	4,000.00
94.	3rd International Conference on Goat Production and Diseases at Tucson, Arizone, USA from 10-15 Jan. 1982	Dr N N Pandita	4,000.00
95.	International Symposium on New Genetical Approaches to Crop Improvement at Karachi, Pakistan from 6-10 February 1982	Dr J L Minocha	2,000.00
96.	International Conference on Plant Protection in the Tropics from 1-4 March 1982 at Kuala Lumpur, Malaysia	Dr S Mukhopadhyay	4,000.00
		Total :	6,18,949.16

12 Bhagat Singh Marg
New Delhi 110001.

Dated : 22 Sept. 1982

for LODHA & CO.
Chartered Accountants,
Sd/- P K JAIN
Partner

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

ANNEXURE 'D'

Details of the Grants released to the Institutions for the Projects under Basic Sciences Scheme 1981-82

Sl. No.	Name of Institution	Name of Projects Leader	Amount Rs.
1.	Banaras Hindu Univeisity, Varanasi	Dr S C Lakhotia	15,830.00
2.	Karnataka Regional Engineering College Suratkhal	Dr M N Chonnabasappa	14,500.00
3.	University of Delhi, Delhi	Prof H Y Mohan Ram	19,598.47
4.	University of Roorkee	Dr K M Srivastava	16,441.80
5.	I I T New Delhi	Dr M S Sodha	25.200.00
6.	University of Delhi	Prof J N Tandon	14,817.46
7.	University of Madras	Dr M Lakshmanan	7,400.00
8.	University of Delhi	Prof G P S Srivastava	30,680.66
9.	Roorkee University	Dr C M Singhal	4,813.25
10.	Jawahar Lal University, New Delhi	Prof P G Kesavan	14,500.00
11.	Kurukshetra University	Dr S K Chattopadhyay	14,932.00
12.	I I T, New Delhi	Dr M S Sodha	15,600.00
13.	University of Kalyani	Dr S Chakrabarti	13,800.00
14.	Calcutta University	Dr S N Ghosh	4,608.00
15.	Banaras Hindu University	Prof. Suresh Chandra	29,900.00

Contd.

Annexure 'D' (Contd.)

Sl. No.	Name of Institution	Name of Projects Leader	Amount Rs.
16.	Indian Institute of Science, Bangalore	Dr C N R Rao	19,290.00
17.	University of Gorakhpur	Dr R P Rastogi	26,619.50
18.	I I Sc Bangalore	Dr V Manjundrah	44,200.00
19.	I I T Kanpur	Dr A K Gupta	17,369.70
20.	Deptt of Mines & Geology, Govt. of Karnataka, Bangalore	Dr G S Pichamuthu	60,670.17
21.	Jadavpur University, Calcutta	Dr D K Sinha	15,200.00
22.	Forest Research Institute, Dehradun	Dr H P Bhatnagar	26,627.89
23.	Madurai University	Dr M Lakshmanan	16,089.30
24.	Delhi University	Prof. K N Saxena	9,110.00
25.	Calcutta University	Dr A Banerjee	14,700.00
26.	Udai Pratap P G College, Varanasi	Dr Suresh Singh	21,600.00
27.	Khallipote College, Behrampur	Dr R N Padhy	9,272.30
28.	Kurukshetra University	Dr D M Puri	1,500.00
29.	National Chemical Laboratory, Pune	Dr R Badrinarayan	13,500.00
30.	King George Medical College, Lucknow	Dr S S Agarwal	20,575.00
31.	Bhagalpur University	Dr S P Sinha	9,919.36
32.	Bhaba Atomic Research Centre	Dr C P Phondke	14,340.00
33.	J N U New Delhi	Prof. G S Singhal	13,846.65
34.	Jadavpur University Calcutta	Dr S K Ghosh	2,000.00

35.	A I I M S New Delhi	Dr T N Chapekar	16,500.00
36.	Rajasthan University Jaipur	Dr A B Roy	30,700.00
37.	Calcutta University	Dr (Miss) Anita Pol	7,500.00
38.	Shri Venkateswara College	Dr Y K Bhoom	18,500.00
39.	I I Sc Bangalore	Dr M S Hegde	13,500.00
40.	Cancer Research Institute Bombay	Dr A N Bhisey	39,200.00
41.	AIIMS New Delhi	Dr H M Chawla	20,855.41
42.	Department of Mines & Geology, Bangalore	Dr N N Vasudeva	21,500.00
43.	A.I.I.M.S., New Delhi	Dr V Bijlani	15,000.00
44.	I.I.T., Bombay	Dr H V Kheer	16,644.25
45.	I.I.T., New Delhi	Dr A Banerjee	13,500.00
46.	Calcutta University	Dr A K Sharma	35,600.00
47.	Regional Res. Lab., Jammu	Dr C M Atal	22,825.10
48.	National Botanical Res. Institute Lucknow	Dr T N Koshoo	27,500.00
49.	Banaras Hindu University Varanasi	Dr B K Chakrabarthi	13,500.00
50.	Sardar Patel University Vallabh	Prof J J Shah	10,500.00
51.	National Botanical Res. Instt.	Dr D V Amla	4,300.00
52.	Indian Toxicology Res. Centre, Lucknow	Dr R C Srivastava	5,000.00
53.	Banaras Hindu Universjty	Dr Asha Chandola	3,000.00
54.	I.I.Sc., Bangalore	Dr P Balaram	13,887.10
55.	I.I.T., New Delhi	Dr V D Vankar	8,558.50
56.	Vikram University Sajjan	Dr R K Chhajlani	2,000.00
57.	I.I,T., Khargpur	Prof. D N Bose	800.00
58.	Bhagalpur University	Dr J S Datta Munshi	29.800.00
59.	I.I.Sc., Bangalore	Prof. C C Patel	21,393.65

Contd.

Annexure 'D' (Contd.)

Sl. No.	Name of Institution	Name of Project Leader	Amount Rs.
60.	University of Kashmir, Srinagar	Dr K P Dubey	20,500.00
61.	Kurukshetra University	Dr K K Rishi	9,791.20
62.	I.I.T. Bombay	Dr K S Balasubramanian	25,552.60
63,	I.I.T. Madras	Dr J C Kuriacose	14,800.00
64.	University of Calcutta	Prof. Ashok Ghosh	46,500.00
65.	Kurukshetra University	Dr P C Jain	26,394.63
66.	Shri Venkateswara University Tirupati	Dr V R Krishnan	10,200.00
67.	Bose Institute, Calcutta	Dr (Mrs) B Ghosh	15,800.00
68.	Jadavpur University	Prof. K K Rohtagi—Mukherjee	25,206.62
69.	University of Kalyani	Dr H Saha	17,000.00
70.	M S. University of Boroda	Prof. V V Modi	20,400.00
71.	Punjab Agril. University	Dr B S Ghai	6,518.00
72.	Patna University Patna	Dr N C Ghose	48,600.00
73.	JNU New Delhi	Dr (Mrs) S D Sharma	10,000.00
74.	I I Sc. Bangalore	Dr S K Brahmachari	19,000 00
75.	I I Sc. Bangalore	Dr V Krishnan	9,800.00
76.	I I T Kharagpur.	Dr K Rahi	13.200.00
77.	Loyola College Madras	Dr T N Ananthakrishnan	39,200 00
78.	Kalyani University	Dr D P Heldar	6,600.00
79.	University of Roorkee	Dr A K Saxena	11,000.00
80.	University of Poona	Dr S Panhaya	14,700 00
81.	I I T Kharagpur	Dr S K De	5,800.00

82.	National Institute of Oceanography, Goa	Dr S R Rao	41,200.00
83.	R B S College Agra	Dr S V S Chaudhuri	7,100.00
84.	The North Eastern Hill University Shillong	Dr P Tandon	12,600.00
85.	Punjabi University Chandigarh	Dr S K Kulkarni	11,700.00
86.	University of Poona, Pune	Dr S P Modak	55,000.00
87.	The Observatory, Lodhi Road, New Delhi	Dr C Ramaswamy	6,000.00
		Total :	15,61,849.51

for LODHA & CO.
Chartered Accountants
Sd/- P K JAIN
Partner

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

12 Bhaghat Singh Marg,
New Delhi-110001
Dated : 22 Sept. 1982

ANNEXURE 'E'

International Conference, National Seminars, Symposia, Workshop, Summer/Winter Schools Sponsored/ Supported by INSA During 1981-82

	Amount Rs.
1. International Conference on Soil Science at New Delhi.	30,000
2. International School of Synthesis of Crystal Growth at NPL, New Delhi.	30,000
3. International Conference on Environmental Education at New Delhi.	30,000
4. International Symposium on Cecidology with Special Reference to Zoocecidia and Pathological Morphogenesis (To be held in 1982-83).	10,000
5. International Conference on Condensed Chromatin and the Human X-Chromosome at IISc., Bangalore.	30,000
6. International Workshop on the Physics of Semiconductor Devices at SSPL, New Delhi.	15,000
7. Virology Conference at CPRI, Simla.	5,000
8. International Symposium on Water Resources Conservation, Pollution and Abatement at Roorkee University.	5,000
9. Fourth National Symposium on Radiation Physics at Panjabi University, Patiala.	5,000
10. Workshop-cum-Course on Carcinogenicity, Mutagenicity and Teratogenicity at CRI, Bombay.	10,000
11. International Symposium on Microwaves & Communication at IIT, Kharagpur.	5,000
12. Regional Conference on Teaching of Quantum Mechanics including its Philosophical Implication (To be held in 1982-83).	
13. International Symposium-cum-Workshop on Non-Isotopic Immunoassays and their Applications at New Delhi.	5,000

Contd.

	Amount Rs.
14. International Seminar on 'Living State' at AIIMS, New Delhi.	5,000
15. Seminar on Astronomy and Astrophysics on the occasion of 7th Annual Session of Astronomical Society of India at Roorkee University, Roorkee.	5,000
16. International Symposium on Theoretical Physics (a) Field Theory (b) Statistical Physics and (c) Astrophysic at Delhi University, Delhi.	10,000
17. Second National Symposium on Position Annihilation at University of Madras, Madras.	5,000
18. National Space Science Symposium at TIFR, Bombay.	5,000
19. XII National Conference on Crystallography at Nagpur.	5,000
20. Seminar on Organometallic Compounds in Chemical Synthesis at Rajasthan University, Jaipur.	5,000
21. Workshop-cum-Seminar on Computational Fluid Dynamics at IISc., Bangalore.	5,000
22. Seminar on Building Materials—Their Science and Technology at New Delhi (INSA).	5,000
23. Seminar on Exploration Geophysics at N.I.O., Goa.	5,000
24. Applications of Catastrophe Theory in Earth Sciences at Roorkee University, Roorkee.	5,000
25. Workshop on Fluid Inclusions in Minerals—Its Scope and Applications at IIT, Bombay.	5,000
26. International Symposium on Plant Cell Culture in Crop Improvement at Bose Institute, Calcutta.	5,000
27. Workshop on Animal Cell Culture and Differentiation at Poona University, Poona.	10,000
28. Workshop on Evaluation of Mutagenic Potential of Environmental Agents—Microbial and Mammalian System at BARC, Bombay.	5,000
29. Gene Structure, Expression and Recombination/ Structure and function of Biomembranes, at the time of 50th Annual Meeting of Society of Biological Chemists (India) at Baroda University.	5,000

Contd.

	Amount Rs.
30. International Symposium on Early Diagnosis and Prevention of Disability and National Symposium on Tribal Health at B.J. Medical College, Poona.	5,000
31. Third International Symposium on Plant Pathology at IARI, New Delhi.	
32. Symposium on Chemistry, Agriculture and Man on the Occasion of 90th Birthday Celebration of Prof. N.R. Dhar at NAS, Allahabad.	10,000
33. Symposium-cum-Workshop on Current Neurosurgical Practices at AIIMS, New Delhi.	5,000
34. 4th All India Congress of Cytology and Genetics, University of Kalyani, Kalyani.	5,000
35. All India Symposium on Biology of Reproduction in Plants at Delhi University, Delhi.	5,000
36. Workshop on Gravitation and Relativistic Astrophysics, at PRL, Ahmedabad.	5,000
37. All India Plasma Science Symposium, at IIT, Delhi.	10,000
38. Workshop on Application of Mossbauer Effect	5,000
39. XIX General Assembly of LAU	10,000
40. International Symposium on Plant Cell Culture in Co-op Improvement.	10,000
41. Seminar on III National Regional Conference on Drug Abuse.	
Total :	3,40,000

For LODHA & CO.
Chartered Accountants
Sd/- P K JAIN
Partner
12 Bhagat Singh Marg
New Delhi 110001
Dated : 22 Sept. 1982

Sd/- A.K. BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

ANNEXURE 'F'

Symposia of the Academy for the Year 1981-82

			Amount Rs.
1.	Basic Sciences Seminar at Hyderabad		20,705.61
2.	International Conference on Flood Disasters		47,714.53
3.	International Conference on Solar Eclipse		6,047.75
4.	Basic Sciences Seminar at Poona (Last Year)		8,585.35
5.	Symposium on Rain Water and Dryland Agriculture (Last Year)		1027.50
			48,080.74
	Less : Receipts against Solar Eclipse	10,331.30	
	Scientific Assessment & Learning Achievement	52.60	10,383.90
			73,696.84

for LODHA & CO.

Chartered Accountants
Sd/- P K JAIN
Partner

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGAR WAL
Accounts Officer

12 Bhagat Singh Marg
New Delhi-110001
Dated : 22 Sept. 1982

ANNEXURE 'G'

Symposia, Visits under Collaborative Programme

Indo-Soviet Collaborative Programme :

	Amount Rs.	Amount Rs.
(*i*) *Visit by Indian Scientists*		
Dr S C Tonwar	11,450.00	
Prof P S Goel	12,246.00	
Dr S K Arora	12,470.00	
Prof K M V Apparao	11,896.00	
Prof T T Narasimhan	12,278.00	
Prof K Ramchandram	12,486.00	
Dr S P Magu	12,276.00	
Dr Alok R Ray	12,280.00	
		97,382.00
(*ii*) *Visit by Soviet Scientists to India*		
Dr R C Dzhamalov	6,186.95	
Dr A A Novikoy	6,688.25	
Dr V I Makarov	27,769.95	
Prof O B Ptitsyn	10,133.90	
Dr A A Alexandrov	11,278.65	
Dr Z P Kaushpedas	10,401.35	
Dr B M Shustov	6,827.00	
Dr M S Khaikin	9,128.00	
Prof Y O Chinnikov etc.	2,475.00	
Dr V S Sanamiah	6,320 60	
Prof A S Davidov	1,887.05	
Prof I S Lyubutin	26,870.50	
Prof V N Kristnikov	29,594.25	
Dr R D Gavrillin	11,870.75	
Prof A S Holevo	7,787.25	
Dr G B Bokij	19,555.75	
Prof T A Azarov	5,776.00	
Prof A S Marfunin	6,707.00	
Prof F T Borwal	13,311.00	
Dr M Mirualiev	5,776.00	
Previous Year		
Dr (Mrs) N N Kreines	138.75	
Prof V P Gantmakhar	2,088.20	

Contd.

	Amount Rs.	Amount Rs.
Dr (Mrs) V N Nikotin	1,352.75	
Academician V L Ginsburg	2,102.17	
Dr D N Pachajanau	4,843.45	
Dr V J Rochu	315.94	
Dr L V Bedshou	643.60	
Dr (Mrs) M N Stoyanova	108.00	
		2,37,938.06
(*iii*) *Symposia & Seminars* :		
1. Symposium on 'Electric-Chemistry'	51,147.05	
2. Symposium on 'Geology and Useful Minerals of Precambrian Stage'	60,083.10	
3. Symposium on 'Electricity and Chemical Sciences'	1,11,230.15	
	8,554.93	
		1,02,675.23
Exchange of Scientists under INSA-RS Programme		
Visit of Indian Scientists		
Prof A S Paintal	9,074.00	
Dr R K Asundi	8,410.00	
Dr M N M Rao	15,772.00	
Dr M S Hegde	17,140.00	
Prof D V S Jain	9,039.00	
Prof G B V Subramanian	8,621.00	
		68,056.00
Visit by Foreign Scientists		
Dr J W Lewis	2,651.45	
Dr A H Bittles	4,786.00	
Prof J B Goodenough	5,366.60	
Prof D Whitteridge	13,038.00	
Prof C E Johnson	5,124.75	
Dr J R Hichlifee	9,011.50	
Dr D M Brown	10,169.00	
Prof S Ragunathan	10,000.00	
Dr R L Eudson	2,800.00	
Dr K Bullogh	9,250.00	
Dr R G Whithead	1,000.00	
Dr P J Dale	4,873.00	
Dr A Jurand	5,254.00	
Dr (Miss) Ruth Mary Gatnby	7,300.00	

Contd.

	Amount Rs.	Amount Rs.
Prof G S Poonwal	15,774.00	
Dr C S Polten (Previous year)	1,430.90	
Dr K H Jack (Previous year)	2,028.01	
Prof V Sasisekharam	270.00	
Dr A J C Wilson	56.25	
Dr B L F Boswell	75.70	
Dr M G P Stokar	127.00	
		1,10,386.96
INSA-JSPS Exchange Programme		
Visit by Indian Scientists		
Prof T R Anantharaman	15,446.50	
Prof U R Ghatak	12,772.00	
Prof A K Sharma	12,778.00	
Dr V S Tomar	14,458.00	
Dr S C Verma	16,175.00	
Dr D B Bhaskar Rao	16,278,00	
Dr A K Sen	13,448.00	
Dr P C Mahendru	14,454.00	
Dr B Dasgupta	14,560.00	
		1,30,369.50
Visit by Japanese Scientists		
Dr T Masuoka	22,663.00	
Dr Y Suezawa	11,404.00	
Dr S Murai	12,905.00	
Prof N Mato	6,650.00	
Prof I Mikuni	8,963.00	
Prof K Takahashi	3,150.00	
Prof T Sugano	4,550.00	
Prof Y Takahashi	3,850.00	
Prof Y Fujii	18,372.00	
Dr K Igaki	21,063.00	
Prof A Konno	17,715.00	
Prof Y Ujihira	6,728.00	
Dr Y Kaya	2,150.00	
Dr Y Hammy	5,856.00	
Dr T Nitta	10,395.55	
Prof M Doyama	11,828.00	
Dr T Sassakawal (Previous Year)	87.10	
Dr Y Hayosbil (Previous Year)	5,019.00	
		1,73,349.15

Contd

	Amount Rs.	Amount Rs.
INSA Hungary Exchange Programme :		
(i) *Visit by Bungarian Scientists* :		
Dr Denes Dudits		4,140.60
(ii) *Visir by Indian Scientists to Hungry* :		
Prof K Ramachandra	13,816.00	
Prof R P Bambah	8,489.40	
Dr Girjesh Govil	14,508.00	
Dr (Mrs) Usha Subharwal	8,555.00	
		45,368.40
(iii) *Miscellaneous Visits* :		
Dr J N Nanda	1,402.00	
Prof P N Tandon	11,730.75	
Dr V G Bhide	5,330.00	
Dr A S Paintal	2,744.80	
Prof Steward	8,912.00	
Prof S C Bhattacharya	4,005.00	
Dr M G K Menon	15,774.00	
Dr M G K Menon	2,200,00	
		52,098,55

for LODHA & CO.
Chartered Accountants
P K JAIN
Partner

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

12 Bhagat Singh Marg
New Delhi-110001.
Dated : 22 Sept. 1982

ANNEXURE 'H'

Financial assistance for participation in non-ICSU Conferences

Sl. No.	Name of the conference, place, and date	Name and address of the delegate	Financial support granted by the INSA
1.	2	3	4
1.	Groundwater 81 and International Symp. on Exhibition on Croundwater of Developing Nations at Kuala Lumpur, Malayia from 6-13 June, 81	DR S S THIGALE Lecturer Poona University Poona	Rs. 2332/-
2.	4th Intl. Cong. of Biorheology at Tokyo Japan from 27 July to 1st August, 81	DR J C MISRA Asstt Professor. Indian Instt. of Technology Kharagpur	Rs. 4000/-
3.	Intl. Meeting on Discrete Geometry at Oberwolfach at West Germany from 12-18 July, 81	PROF R J HANS GILL Centre for Advanced Study in Mathematics Punjab University Chandigarh	Rs. 4000/-
4.	NATO/FEBS Advanced Instt at Maratsa, S. Italy from 3-16 May, 81	DR N YATHINDRA Reader Madras Univ. Madras	Rs. 2000/-
5.	Intl. Conf. on Scanning Electron Microscopy at Dallas Texas from 14-18 April, 81	DR HARISH BAHADUR Sr. Research Fellow National Physical Laboratory New Delhi	Rs. 4000/-
6.	Mendelsor Cong. on General and Applied Chemistry at Baku, USSR from 21-26 Sep. 81	PROF H L NIGAM Chemistry Department Allahabad University Allahabad	Rs. 4000/-

Contd.

1	2	3	4
7.	5th Prague Symp. on General Topology and its Relations to Modern Analysis and Algebra at Praha, Czechoslovakia from 24-28 August, 81	DR (MISS) S P ARYA Lecturer in Mathematics Maitreyi College Netaji Nagar New Delhi	Rs. 4000/-
8.	5th Asia Pacific Cancer Conf. at Colombo, Sri Lanka from 1-4 Sept. 81	DR G RAJ Jr Research Officer Biochemistry Department VP Chest Institute Delhi University Delhi	Rs. 4000/-
9.	A Meeting of ISIR at Newcastle upon Tyne UK from 7-10 Sept, 81	DR T SUBRAMANIAM Lecturer in Zoology Deptt. of Zoology Madras University Madras	Rs. 4000/-
10.	Intl. Conf. on Solid Phase Transformation at Pittsburgh from 10-14 August, 81	DR S LELE Reader in Physical Sciences Department of Metallurgical Engineering, Institute of Technology Banaras Hindu University Varanasi 221005	Rs. 4000/-
11.	48th Intl. Foundry Cong at Varna, Bulgaria in Oct. 81	PROF S C PANIGRAHI Asstt. Professor Metallurgical Engg. Department, Indian Institute of Technology Kharagpur	Rs. 3000/-
12.	Intl. Symp. on New Genetical Approaches at Grop Improvement at Karachi, Pakistan from 6-10 Feb. 82	DR D S SIDHU Asstt. Cytogeneticist Genetics Department Punjab Agril. Univ. Ludhiana	Rs. 1500/-
13.	A Symp. on Future of Nucleic Acid Research at Kyoto, Japan from 30 Nov to 4 Dec. 81	DR S K BRAHMACHARI Molecular Blophysics Unit Indian Instt. of Science Bangalore	Rs. 4000/-

Contd.

1	2	3	4
14.	9th Intl. Conf. on Comparative Endocrinology at Hong Kong from 7-11 Dec, 81	DR (MRS) C M CHATURVEDI Lecturer Zoology Department Banaras Hindu University Varanasi	Rs. 1613/-
15.	Intl. Conf. on HLA Hospital Saint Louis, Paris, France from 7-18 Dec. 81	DR R M PITCHAPPAN Reader in Immunology School of Biological Sciences Madurai Kamaraj University Madurai	Rs. 4000/-
		Total	Rs. 50445/-

for LODHA & CO.
Chartered Accountants
Sd/- P K JAIN
Partner

12 Bhagat Singh Marg
New Delhi-110001
Dated : 22 Sept, 1982

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

ANNEXURE-'I'

Travel Grants Under INSA-Costed Travel Fellowship

S. No.	Name of the conference place and date	Name and address of the delegate	Financial support Granted by the INSA
1.	Post Doctoral Training in Plant Physiology at Wien, Austria in March, 81	DR A J JOSHI Department of Botany Sir PP Instt. of Science (Bhavnagar University) Bhavnagar 364002	Rs. 2377/-
2.	Intl. Conf. at American Arachnological Society—Knoxville, USA from 5-9 August, 81	DR S SIVARAMAN Asstt. Prof. of Zoology Loyola College Madras 600034	Rs. 3500/-
3.	First Asian and Pacific Chemistry Cong. at Singapore from 26th April to 1st May, 81	DR AVIJIT BANERJI Deptt of Pure Chemistry University College of Science 92, Acharya Prafulla Chandra Road, Calcutta 700009	Rs. 5000/-
4.	Symp. on Progress of Plant Tissue Culture in Developing Countries at Singapore from 28-30 April, 81	DR (MISS) AMITA PAL Kesearch Asstt. Botany Department Calcutta University Calcutta 700019	Rs. 1979.50
5.	Asian Regional Meeting on Methods of Teaching Physics at Khon Kaen, Thailand from 11-14 Nov. 81	DR S V SUBRAMANYAM Head, Deptt of Physics Sri Venkateswara Univ. Autonomous PG Centre Anantapur, Sri Venkateswara Puram (PO) Anantapur 515023	Rs 2500/-
6.	URSI General Assembly in Washington in August, 81	DR RAJESH PANDEY Research Associate	Rs. 3510.40

Contd.

1	2	3	4
		Physical Research Lab. Navrangpura Ahmedabad 380009	
7.	1981 CERNJINR School of Physics at Hanko, Finland	DR N K MONDAL Research Associate HECR Group Tata Institute of Fundamental Research, Homi Bhabha Road Bombay 400005	Rs. 2400/-
8.	URSI General Assembly in Washington in August, 81	DR B S GOHIL Remote Sensing Area Space Application Centre Jodhpur, Tekra Ahmedabad 380053	Rs. 3702.50
9.	9th Intl. Cong. of Biometerology at Osnabueck and Stuttquart-Hebenheim, FRG from 23 Sept. to 1st Oct. 81	MR W SELVAMURTHY Scientist 'C' Defence Institute of Physiology and Applied Science Delhi Cantt 110010	Rs. 1395/-
10.	XVIth Intl. Cong. on Low Temperature Physics at California Univ. in Los Angeles from 19-25 August, 81 and Intl. Conf. on Phonon Physics at Indiana Univ. Bloomington, USA from 31 August to 3 September, 81	DR PRAKASH CHANDRA SHARMA Lecturer in Physics Department of Physics Banaras Hindu University Varanasi 221005	Rs. 2000/-
		Total:	Rs. 28364.40

for LODHA & CO.
Chartered Accountants
P K JAIN
Partner
12 Bhagat Singh Marg
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Sd/- A K BOSE
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Sd/- C P AGARWAL
Accounts Officer

ANNEXURE 'J'

Basic Sciences List of Advances As on 31st March 1982

S. No.	Particulars	Amount Rs.
1.	Dr P N Bhaduri	200.00
2.	Dr S K Banerjee	200.00
3.	Dr K K Balasubramanyam	200.00
4.	Dr L N Dass	600.00
5.	Dr J S Grewal	200.00
6.	Dr R D Iyer	884.29
7.	Dr Virendra Kumar	7,000.00
8.	Dr Ashok Kumar	600.00
9.	S K Mukherjee	156.00
10.	Dr S P Bhushan	100.00
11.	Dr N K Panikkar	317.53
12.	Dr B M Reddy	200.00
13.	Dr L N Rao	500.00
14.	Dr T J Singh	200.00
15.	Dr Surjeet Singh	500.00
16.	Dr R Vishwanathan	1,806.52
	Total:	13,664.34

for LODHA & CO.
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Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'A'- LIABILITEES

	Amount	Amount Rs.
Funds		
(As per last Balance Sheet)	18,11,981.68	
(Includes cost of Journals/Books/ Furniture, etc.)	1,55,223.90	
		19,67,205.58
Additions during the Year		
General Fund		
(As per last Balance Sheet)	2,76.030.56	
Additions Excess of Receipts & Payment Account of General Fund	54,019.18	3,30.049.74
Chandra Kala Hora Memorial Lectureship Fund		
(As per last Balance Sheet)	2,866.71	
Add : Interest	90.00	2,956.71
Dr B C Guha Memorial Lectureship Endowment Fund		
(As per last Balance Sheet)	18.337.88	
Add : Interest	2,116.22	
	20,454.10	
Less : Expenditure	2,956.00	17,498.10
Dr S S Bhatnagar Memorial Fund		
(As per last Balance Sheet)	11,984.81	
Add : Interest	1,167.90	13,152.71
Silver Jubilee Commemoration Fund		
(As per last Balance Sheet)	2,624.56	
Add : Interest	960.00	3,584.56
Popularisation of Science		
(As per last Balance Sheet)	10,305.06	
Add : Interest	1,032.65	11,337.71
Dr B N Chopra Memorial Lecturship Fund		
(As per last Balance Sheet)	13,894.38	
Add : Interest	929.28	14,823.66

Contd.

	Amount Rs.	Amount Rs.
Shree Dhanwantri Prize Medal Fund		
(As per last Balance Sheet)	24,086.55	
Add : Interest	2,160.00	26,246.55
Building Fund		
(As per last Balance Sheet)		501.00
Prof. T R Seshadri 70th Birthday Medal Fund		
(As per last Balance Sheet)	13,366.65	
Add : Interest	2,000.00	15.366.65
Sundry Donations		
(As per last Balance Sheet)		36,400.03
Vishvakarma Medel Fund		
(As per last Balance Sheet)	38,507.40	
Add : Interest	3,000.00	41,807.40
Model Fund		
(As per last Balance Sheet)	13,695.82	13,695.82
Dr N Rangadhama Rao Medal Fund		
(As per last Balance Sheet)	10,500.00	
Add : Interest	1,000.00	
	11,500.00	
Less : Expenditure	1,000.00	10,500.00
Guru Prasad Fell wship Medal Fund		
(As per last Balance Sheet)	16,500.00	
Add : Interest	1,500.00	18,000.00
Dr H Sivarup Eadowment Fund		10,000.00
Prof. T S Sedasivan Memorial Fund		30,000.00
	Total	25,63,126.22

For LODH & CO.,
Chartered Accountants
Sd/- P K JAIN
Partner
12 Bhagat Singh Marg
New Delhi-110001
Dated: 22 Sept. 1982

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'B'—LIABILITIES

Schedule of Capitalized Expenditure Forming Part of the Balance Sheet as on 31st March 1982

	Amount Rs.	Amount Rs.
History of Sciences:		
(as per last Balance Sheet)		1,44,093.70
IUPAC:		
(As per last Balance Sheet)		63,536.87
Science Policy Unit:		
(As per last Balance Sheet)		2,702.97
Indo-Soviet Collaboration		
(As per last Blance Sheet)		26,235.85
International Biological Programme		
(As per last Balance Sheet)		7,760.19
Scientific Research and Research Training		
(As per last Balance Sheet)		4,98,776.53
INSA Royal Society Exchange Programme		
(As per last Balance Sheet)		11,519.56
Slide Library		
(As per last Balance Sheet)		9,673.23
Travel Fellowship		
(As per last Balance Sheet)		4,899.40
Popularisation of Science		
(As per last Balance Sheet)		14,641.70
National Committes (ICSU)		
(As per last Balance Sheet)		1,226.50
Non-Recurring		
(As per last Balance Sheet)	15,12,258.52	
Add: Expenditure during the year	3,78,954.41	
		18,91,212.93
Total		26,76,279.43

For LODHA & CO.
Chartered Accountants
Sd/- P K JAIN
Partner
12 Bhagat Singh Marg
New Delhi 110001
Dated : 22 Sept. 1982

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'C'—LIABILITIES

Schedule of Liabilities Forming Part of the Bolance Sheet as on 31 March 1982

	Amont Rs.
Sundry Amount Payable (Dr O P Vig)	3,122.82
Deposit for Library Membership	2,360.00
Security from Binders	810.00
Advance Subscription Received	192.00
Earnest Money from Building Contractors	10.024.90
Security from INSA Canteen Bearers	270.00
XXI International Geographical Congress (1968)	2,190.57
Salary Saving Scheme	59.40
Advance Registration (Mineral Resources)	1,200.00
Total:	20,229.69

for LODHA & CO.
Chortered Accountants
Sd/- P K JAIN
Partner
12 Bhagat Singh Marg
New Delhi-110001.
Dated: 22 Sept. 1982

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'D' ASSETS

Schedule of Building & Equipment Forming Part of Balance Sheet as on 31st March 1982

	Amount Rs.	Amount Rs.
Old Block : (As per last Balance Sheet)		4,45,526.25
New Block : (As per last Balance Sheet)		4,66,051.03
Car Parking & Others : (As per last Balance Sheet)		24,112.78
Non Recurring Expenditure : (As per last Balance Sheet)	5,63,653.03	
Additions during the year :		
i) Furniture, Fixtures & Equipment	72,925.62	
ii) Addition & alteration	2,04,351.27	
iii) Library Fittings	20,212.50	
iv) Inter-Communication System (EPX)	3,786.28	
		8,64,928.70
Furnishings : (As per last Balance Sheet)	1,56,126.62	1,56,126.62
Additions during the year	—	
	Total :	19,56,745.38

for LODHA & CO.
Chartered Accountants
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Partner
12 Bhagat Singh Marg
New Delhi 110001
Dated: 22 Sept. 1982

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'E' ASSETS

Schedule of Furniture and Fixtures and Equipments and Other Capital Expenditure Forming Part of Balance Sheet as on 31st March 1982

	Amount Rs.
Scientific Research and Research Training in Basic Sciences (as per last Balance Sheet)	52,588.45
Project Leaders Capital Expenditure (as per last Balance Sheet)	4,41,188.08
Total:	4,93,776.53

for LODHA & CO.
Chartered Accountants
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Partner
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Dated : 22 Sept. 1982

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'F'—ASSETS

Schedule of Furniture & Equipment Forming Part of Balance Sheet as on 31st March 1982

	Amount Rs.	Amount Rs.
Office (As per last Balance Sheet)		77,360 35
Library (As per last Balance Sheet)		67,188.55
Slide Library (As per last Balance Sheet)		9,673.23
History of Science (As per last Balance Sheet		66,350.56
National Committee ICSU (As per last Balance Sheet)		1,226.50
InternatianaI Biological Programme (As per last Balance Sheet)		7,760.19
Indo-Soviet Collaboration (As per last Balance Sheet)		17,043.09
Science Policy Unit (As per last Balance Sheet)		2,702.97
INSA Royal Society Conference (As per last Balance Sheet)		11,519.56
Travel Fellowship (As per last Balance Sheet)		4,899.40
Popularisation af Science (As per last Balance Sheet)		14,641.70
IUPAC/Furniture (As per last Balance Sheet)		7,766.10
IUPAC/Symposium (As per last Balance Sheet)		43,537.39
	Total :	3,31,669.59

for LODHA & CO.
Chartered Accountants
Sd/- P K JEIN
Partner
12 Bhagat Singh Marg
New Delhi 110001
Dated : 22 Sept. 1982

A K BOSE
Executive Secretary

C P AGARWAL
Accounts Officer

SCHEDULE 'G' ASSETS

Schedule of Bocks & Journals Forming Part of Balance Sheet as on 31st March 1982

	Amount Rs.	Amount Rs.
Books :		
(As per last Balance Sheet)	13,20,700.02	
Additions during the year	59,854.43	
		13,80,554.45
History of Sciences :		
(As per last Balance Sheet)	1,19,444,41	
Additions during the year	17,824.31	
		1,37,268.72
Journals :		
(As per last Balance Sheet)	15,62,138.55	
Additions during the year	1,55,223.90	
		17,17,362.45
Total:		32,35,185.62

for LODHA & CO.
Chartered Accouutants
Sd- P K JAIN
Partner
12 Bhagat Singh Marg
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Dated: 22 Sept. 1982

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'H'—ASSETS

Schedule of Investments and Forming Part of Balance Sheet as on 31st March 1982

	Amount Rs.	Amount Rs.
3% Coversion Loan 1946 Face Value Rs. 29,600.00 (including Securities of Rs. 3,000 for Chandra Kala Hora Medal Endowment Fund & Funding Accound		30,189.24
Fixed Deposits with S.B.I.:		
i) Employees Provident Fund		3,28,581.00
ii) General Fund	2,60,865.00	
Addition during the year	75,000.00	3,35,865.00
iii) Against Funding Account		64,834.00
iv) Dr S S Bhatnagar Memorial Fund		7,786.00
v) Silver Jubilee Commemoration Medal Fund		3,840.00
vi) Popularisation of Science Fund		5,901.00
vii) Dr B C Guha Memorial Fund		11,543.00
viii) Dhanwantri Prize Fund		16,000.00
ix) Dr B N Chopra Memorial Lectureship Fund		10,325.00
x) Prof T R Seshadri's 70th Birthday Fund		10,000.00
xi) Viswakarma Medal Fund		33,000.00
xii) Guru Prasad Fellowship Lecture Fund		15,000.00
xiii) Prof K Rangadhama Rao Lecture Fund		10,000.00
xiv) Dr H Swarup Endowment Lecture		10,000.00
xv) Prof T S Sadasivan Medal Fund		25,000.00
	Total	9,17,864.24

for LODHA & CO.
Chartered Accountants
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Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'I'

Schedule of Cash and Bank Balance Forming Part of the Balance Sheet as on 31st March 1982

		Amount Rs.
Petty Cash:		2,000.00
Postage Advances :		
i) Franking Machine Main Office	4,001.65	
ii) Franking Machine Publications	3,506.05	
iii) Postage cash Calcutta Office	359.35	7,867.05
Imprest Account Calcutta	87.54	
IJHS Calcutta	318,70	
		406·24
Syndicate Bank C/A No. 132		11,347.71
State Bank of India :		
i) Saving Account C & I-25		33,865.15
ii) Fund A/C No. C & I-9		36;186 22
iii) Employecs Provident Fund A/C No. C & I-10		1,24,085.44
iv) Current Account No. 330007		2,78,656.16
Current Account at Calcutta		10,501.00
Current Account at Calcutta (IJHS)		956.36
	Total :	5,05,871.33

for LODHA & CO.
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Dated : 22 Sept. 1982

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Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'J'

	Amount Rs.	Amount Rs.
ADVANCES (NON-PLAN)		
1. *Normal Activittes*		
(i) Prof R C Sinha, Patna Symposium on Recent Researches & Application of Biochemistry 20-26 February 1973 at Patna	5,000.00	
(ii) Dr S K Sinha Symposium on Photosynthesis and Productivity in February 1978	4,000.00	9,000.00
2. *Local Chapter*		
1. Prof P T Narasimhan Kanpur (30 1.80)	500.00	
2. Prof P V Sukhatme Poona (18.6.80)	1,000.00	
3. Prof N B K Nair (15.9.80)	500.00	
4. Prof Dinesh Mohan (2.2.82)	500.00	
5. Dr T R Anantharaman (23.6.79)	1,000,00	
6. Dr T V Desikachary Madras (17.9.80)	1,000.00	
7. Prof S K Trehan (8.7.81)	500.00	
8. Prof C N R Rao Bangalore (16.4.81)	500.00	
9. Prof (Mrs) A Sharma Calcutta (29.6.81)	500.00	
10. Prof R R Daniel Bombay (8.6.81)	500.00	
11. Prof T N Ananthakrishnan Madras (7.8.81)	500.00	
12. Dr H L Nigam	500,00	7,500.00

Contd.

Schedule 'J' (Contd.)

	Amount Rs.	Amount Rs.
3. *Regional Unit (Prof. S K Trehan)*		370.05
4. *Popularisation of Science*		
(i) Prof. Mrs. Archana Sharma	500.00	
(ii) Dr. B G Desh Pande, Poona	1,030.00	1,500.00
5. *L T C*		
(i) Mrs. S Mitra, Calcutta	252.80	
(ii) Shri Shish Pal, New Delhi	1.30	254.10
6. *Sundry Advances*		
(i) Amount with Cashier, (Postage)	537.15	
(ii) Shri Raj Kumar (Petrol)	200.00	
(iii) Shri Daulat Singh (Guest Room)	100.00	
(iv) Shri R N Ghosh	200.00	
(v) Shri Shish Pal	120.00	1157.15
7. (i) Dr S R Rao (TA/DA)	4,000.00	
(ii) Dr N B K Nair	55.00	4,055.00
8. *Advances to Staff*		
(i) Festival	6,120.00	
(ii) Conveyance Scooter/Cycle	18,041.00	
(iii) Puja Advance	280.00	24,441.00
9. *ICSU*		
(i) Symposium on Fermentation (1984)		2,500.00
Secretarial Assistance		
1. Dr B B Singh	500.00	
2. Dr Jagdish Singh	500.00	
3. Dr B M Reddy	500.00	
4. Dr A R Gopal-Ayengar	250.00	
5. Dr B K Anand	250.00	
6. Dr P K Day	250.00	
7. Prof K Venkatesan	150.00	
8. Prof S K Trehan	1,250.00	
9. Dr V R Venugopal	250.00	
10. Dr I C Pande	250.00	
11. Prof V L S Bhimasankaram	250.00	4,400.00

Contd.

Schedule 'J' (Contd.)

	Amount Rs.	Amount Rs.
(ii) Symposia/Seminar & Mossbaur Effect		15,370.52
(9A) T C (I) Pvt. Ltd., New Delhi		7,395.00
10. *Advances ICSU Delegation*	2,895.00	
Plan : Non-ICSU	8,000.00	10,895.00
Basic Sciences as per Annexure		13,664.33
Research Fellow		200.00
Hyderabad/Irrigation Structures and Sites	2,000.00	
Dr Mrs S P Arya (UNESCO Book Project)	500.00	2,500.00
Sh. A S Khan (History of Sciences)		4,000.00
House Building Advances Excluding Interest		
1. Shri S K Sahdher	40,248.00	
2. Shri Viri Singh	17,810.00	
3. Shri S K Sahani	47,218.00	
4. Shri Nand Kishore	16,960 00	
5. Shri B D Ukhal	9,595.00	
6. Shri Dev Raj Khosla	33,712.00	
7. Shri Surjit Sindh	44,100.00	
8. Dr A K Bag	20,250.00	2,29,893.00
History of Sciences		
Dr A K Chakravorty	250.00	
Pay & Accounts Office, Bombay	200.00	450 00
Total :		3,39,545.16

for LODHA & CO.
Chartered Accounts
Sd/- P K JAIN
Partner
12 Bhagat Singh Marg
New Delhi 110001
Dated : 22 Sept. 1982

Sd/- A K BOSE
Executive Secretary

Sd/- C P AGARWAL
Accounts Officer

SCHEDULE 'K'

Schedule Forming Part of Income & Expenditure Account for the Year Ending 31st March 1982

SCHEME	Unspent balance as on 1-4-82	Govt. Grant Received during the year	Other receipts	Total Available	Expenditure during the year	Unspent Balance as on 31-3-82
1	2	3	4	5	6	7
A. (i) *Non-Plan*	59,184.09	33,35,000.00	2,93,849.56	36,88,033.65	35,33,211.51	1,54,822.14
(ii) ICSU Subscriptions	(—)32,361.30	4,80,400.00	—	4,48,038,70	5,00,189.49	(—)52,150.79
B. (i) *Plan* : DST 40,50,000.00	27,747.87					
(ii) Avicenna Seminar : DST 1.000 Ministry of Education 0.800 (CSIR)	1,00,000.00	42,30,000,00	31,364.06	43,89,111.93	43,89,671.14	(—)559.21
C. Award for Young scientists	—	2,50,000.00	—	2,50,000.00	2,14,052,05	35,947.95
D. MIsc. :						
(i) Symposium on Workshop on Cooperative Research in India & USA.	23,364,30	—	—	23,364.30	—	23,364.30

Contd.